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A study conducted in Poland, Yugoslavia, Czechoslovakia, and the U.S.S.R. reports how these countries functioned in bridging the traditional gap between the development of theoretical research in education and the achievement of the desired reforms in school policies and practices. The choice of communist dictatorships as study subjects was based on the widespread beliefs that dictatorships can effect change more rapidly and on a wider scale than a democracy and that communist countries expend enormous monetary and human resources on education. In Poland, Yugoslavia, and Czechoslovakia research findings were based on interviews with and observations of people vital to the field of education in universities, government agencies, and secondary schools in 1967. Topics of discussion centered on published pedagogical works, aspects of teaching, and research in progress. An extensive bibliography, by country, of works related to education in these countries is included. Material based on the incompleted study conducted in 1965 on the Soviet Union appears as an appendix to the report. (CW)

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A COMPARISON OF EDUCATIONAL RESEARCH ORGANIZATIONS AND METHODS, AND THEIR RESPECTIVE INFLUENCE ON SECONDARY SCHOOL PRACTICES, IN POLAND, YUGOSLAVIA, CZECHOSLOVAKIA AND THE U.S.S.R.

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Table of Contents

Page

Preface and Acknowledgments iv

Introduction and Summary 1

Part I. POLAND

A. The Institute of Pedagogy in Warsaw 10

B. The Pedagogical Faculty at the University of Warsaw 14

C. The Higher Pedagogical School at Krakow 18

D. The Pedagogical "Faculty" of the University of Lublin 19

E. Summary and Conclusions 22

Part II. YUGOSLAVIA

A. The Federal Secretariat for Education and Culture 23

B. Two Pedagogical Research Institutes in Belgrade 24

C. The Department of Education Measurement and Research for the City of Belgrade 27

D. The Departments of Psychology and Pedagogy at Belgrade University 29

E. The Trade Union of Educational Workers 30

F. Belgrade Gymnasium No. IV 31

G. The Electrotechnical School in Belgrade 32

H. The Higher Pedagogical School in Belgrade 34

I. Educational Research and Practice in Zagreb 35

J. The Institute of Educational Research in Ljubljana 39

K. The Department of Pedagogy in the Philosophical Daculty at Sarajevo University 41

L. Summary and Conclusions 42

Part III. CZECHOSLOVAKIA

A. The Research Institute for Pedagogy in Prague 44

B. The Pedagogical Department of the Philosophical Faculty of Charles University in Prague 46

C. The Institute for Research in Teacher Education at Charles University 47

D. The Pedagogical Faculty of Komensky University at Bratislava 51

E. The Pedagogical Faculty of Komensky University at Trneva 52

F. The Research Institute of Pedagogy in Bratislava 53

G. Summary and Conclusions 56

Part IV. APPENDIX: THE SOVIET UNION (addenda to the Report) 59

A. Strengths and Weaknesses in Soviet Research in Education 60

B. The Academy of Pedagogical Sciences 70

Part V. BIBLIOGRAPHY 73

PREFACE and ACKNOWLEDGMENTS

The author of this report is indebted to so many people that a mere listing of their names and positions would require at least ten pages. Moreover, most of these people live in nations where some recriminations might follow the discovery that they were even mentioned, let alone cited, in a work of this nature. For these reasons, it seems best that the persons named in the text of the report (all of whom gave permission for inclusion) stand as representative of the hundreds in several countries who gave time and effort and materials to the author.

One person, however, certainly deserves specific mention: that is the wife of the author who was also his research assistant throughout the term of the project. Besides participating in nearly all of the interviews, she was of great help in assembling and rewriting the mass of material collected.

Gratitude is also expressed to the U. S. Office of Education for the funds granted the project, and also to the (Ford) International Dimensions Fund of the University of Pittsburgh for its supplementary award. The thanks of the author go to the Dean of the School of Education of the University for permission to take so long a leave of absence from campus duties. Hopefully, the report will not be a cause for anyone regretting these acts of generosity.

INTRODUCTION and SUMMARY

The problem under consideration in this project is the age-old one of the linking of theoretical research in education to actual school policies and practices. It seems that modern research methods and speed of mass communication has not solved the problem, and educators (as well as architects, engineers and industrialists) are constantly searching for ways to shrink this gap which they do not regard as unavoidable. Some lapse of time between the publication of research findings and the beginnings of programs to utilize them must, of course exist. Even though these findings reach many more people much more rapidly than in previous generations, the same amount of time as before must be allowed for consideration, discussion, deciding between alternatives, and organizing the new or revised programs of activity. What perplexes both scholars and practitioners, however, is the inordinate gap in time and the frequent difficulties encountered even between final decisions among policy-makers and the actual achievement of the desired reforms in school organization, administration, curriculum, methods, and even re-districting of local systems.

This project never assumed the responsibility for finding a definitive answer to the problem, but attempted merely to discover how certain other nations bridged the gap between theory and practice in the field of education. Since it is commonly believed that countries ruled by dictatorships are able to make this transition more quickly and on a wider scale than nations "burdened with the impedimenta of democracy," the choice was narrowed to societies under this type of government. Because it is well established that nations under Communist dictatorships devote huge monetary and human resources to the cause of education, the field was reduced still further. The final choice of the four countries considered in this report was based on several facts: (1) Yugoslavia, because it has been independent of the USSR almost since its Communist government was established more than twenty years ago; (2) Poland, because it was the first of the other Communist states to gain (in 1956) partial but significant autonomy in educational matters while remaining under strong Soviet influence; (3) Czechoslovakia, because at the time this project was conceived (1965) it had won considerable self-determination in education from the Soviet Union and begun a popular return to indigenous principles and methods; (4) the USSR because it still is the source from which all these nations draw inspiration and guidance in their educational and many other affairs.

The project proceeded as planned in its first three parts but the reporter and his assistant were three times refused visas to the Soviet Union. Therefore, what should have been Part IV of this project has retained this designation in order to preserve the original structure of the report, but has also been relegated to the status of appendix in order to indicate: (1) that it makes no pretense of being more than the results of interviews and observations made in 1965, two years before the term of the report; (2) that it was not visited as a part of this project; (3) that its data, while correct in most aspects, is out-of-date at several points; and (4) that no school visitations were made or intended in the collection of the data. However, it has two characteristics in common with the first three parts: its purpose was to study the national agencies of educational research; and the methods employed were interviews and observations. It is hoped that its inclusion will afford at least some basis of comparison.

The other three nations were visited in the period March--June 1967, and at least a month was spent in each. Of the 33 people in these countries named in the project application as being vital to the project, all but eight were interviewed at length, and in those eight cases their replacements or assistants acted in their stead. Although a careful account of all interviews was attempted, it was sometimes impossible to get the names of all persons at a conference where the participants numbered ten or twelve. A cautious estimate of the number with whom extended and serious discussion was held provides the figure 225, and many of these were contacted several times. At nearly all the interviews both the reporter and his assistant were present, each took a separate set of notes, and these notes were compared to insure accuracy. Also, much of the material listed in the bibliography was provided at these interviews, or obtained before leaving the country, so as to check oral statements with published information. It is noteworthy that not once was a serious discrepancy discovered, and the few minor ones were resolved in follow-up interviews.

A comment on the interview method is in order at this point. In oral discussion, even in one's native language, there is always the chance of the subject's making a deliberate or accidental misstatement, and the same likelihood of the reporter misunderstanding a statement or recording it incorrectly. When the native languages of the discussants are different, the chances of error are multiplied, even when a competent interpreter is provided. All these hazards were taken into account before the project application was made, but the method was still judged to be the best under the circumstances. After all, these nations do not conduct their schools behind high walls to shut out the vision of their own researchers, and they publish and disseminate thousands of books and pamphlets on their educational activities. Many of these are published in English and other foreign languages, others are translated here and in other countries, and a large number of our own research institutions and libraries obtain these materials, analyze them, and publish commentaries. The only means of access to the thoughts and opinions of leading educators in these countries which are denied all but a few Americans are the personal interview and the close observation of educational establishments.

The interview method has certain other advantages. It produces information *before* it is published, frequently weeks and months in advance. Some of the ideas described in this report may not be print or in project for years and some, of course, may never be. The personal aspect of the interview has long been recognized: persons of widely different cultures come to know one another as people, not just as names attached to written works. Finally, the interview is a two-way street, permitting spontaneous response on both sides, and providing a channel for intangible but often valuable mutual understanding. For these reasons, the report concentrates upon the results of the more important of the interviews and observations, in the hope that these will supplement the undoubtedly important findings of other methods of research.

Summations of the conclusions in regard to each of the three nations examined during the term of this project appear at the end of each of the first three parts, while Part IV-Appendix contains a different kind of summary. No *general* conclusions or comparisons with the United States were anticipated or promised, but it is probably safe to offer one contrast between the subjects of the project and the United States. In Poland, Yugoslavia, Czechoslovakia and the Soviet Union, research findings encounter great difficulty in achieving initial local or small-scale application to practice but, once passing this barrier, rapidly attain wide regional and even national reforms. In our country, it is relatively easy for a good research project to convince one school superintendent that he should set up a small experiment to test further the validity of the conclusions, and this experiment can in time be emulated by others. Very seldom, however, can reforms on a broad scale be brought about quickly in the United States, no matter how successful they are in a given locality. What lessons may be found in this comparison must be left up to other investigations.

There is no reason to offer the usual list of Recommendations, either here at the end of the report. There is relatively little that American educators can do to assist or impede the efforts of their counterparts in these countries to improve their educational systems. Our government does have a personnel exchange program with Yugoslavia under the terms of the Fulbright Act, and there are some official as well as private exchanges with both Poland and Czechoslovakia. Certainly many scholars in all these countries would welcome a vast expansion of these arrangements. We also conduct some cultural cross-fertilization with the Soviet Union, although this program encounters many difficulties and depends almost entirely upon the decisions of the Soviet Government. Nevertheless, it seems to this reporter, who was one of these exchange scholars in 1965, that the United States gains much more than it loses in this process.

One American commodity for which East Europeans exhibit a voracious appetite is books of a professional nature. Nearly every educator encountered during the course of this project asked that books on education be sent him, and most offered generous reciprocation in kind. The experience of this reporter has been that these people are undoubtedly willing to give books on the spot, or even to mail them to America, but their motivation in this direction tends to decline after a long period of separation. But this all-too-human fault is no reason why we should not continue to supply them with all the materials we can. Certainly they need personal copies of our books more than we need theirs, because their public and institutional libraries contain very few recent foreign works in education or any other phase of life. Only the Party-favored research institutes have sufficient valuta budgets to purchase large amounts of literature abroad, and these agencies seldom share their acquisitions with any but the most prominent scholars.

Part I POLAND

A. The Institute of Pedagogy in Warsaw

Founded in 1950, the Institute operates under the Ministry of Education and employs nearly one hundred full-time workers of whom seventy are classified as scientific researchers. Most of the others serve as librarians or administrative officers. Any person can suggest a project to the Institute but it has the right of free selection except for those proposed by the Ministry. The Director is Dr. Wincenty Okon, a distinguished pedagogue who has been Dean of the Pedagogical Faculty at the University of Warsaw and is for the second time since 1955 in his present position. He has three deputies: for instruction, for educational techniques, and for administration. Several of the department heads were interviewed at length in April 1967, and there follows the accounts of the more important of these consultations.

1. Professor Alexander Lewin is chief of the Laboratory in Moral and Spiritual Education, whose chief project at present is the operation of an experimental school (No. 187) under the principalship of Zofia Religowa. It is an eight-year school established and organized to put into immediate practice the research findings of the laboratory. Named in honor of the early Soviet educational theorist and practitioner, Anton Makarenko, it deliberately attempts to carry out his basic ideas, on which Prof. Lewin is an outstanding authority. The views of Makarenko are not taken as dogma but as stimulus and inspiration toward even more timely educational thought and activity. Also toward this end, the teachers at the school take special courses during vacations and holidays in order to become more familiar with both Makarenko's views and the on-going research projects of the Institute. Every three years the teachers (nearly all of whom are also part-time researchers at the Institute) prepare a report covering their progress along such lines as (a) methods of putting research findings into practice, (b) how the school meets new conditions and new demands, (c) new knowledge in the area of learning processes, (d) guidance of new teachers, (e) the use of manual labor in the school, (f) the organization of different types of groups within the class, (g) assigning tasks to the children, and (h) working with parents.

While parents still get two official reports each semester, the emphasis is no longer on knowledge of course or textbook content, but upon the child's understanding of the environment, his relations with his peers, teachers and parents, and his self-evaluation of his progress in his attitude toward study. Personal neatness, and behavior at home and school, are also considered in the analysis. The report is then derived from the estimates in all these aspects made by the teacher, the group, and the child himself. According to Prof. Lewin and Mrs. Religowa, this method of evaluation assists the pupil in his own self-education, because children are interested in the attitude of others toward them. Most schools, unfortunately, do not take advantage of this tendency. It is true that some children need much less of this kind of help than others, but nearly all can profit to some extent through assistance from the more advanced pupils. The role of the teacher in this instance is to make sure that the correct advice and example are given, so as to avoid a lowering of standards of behavior and attitude.

2. Experimental School No. 4 named for Ludwig Zamenov, the inventor of Esperanto, is operated under the direct supervision of Prof. Edward Fleming, a native Pole of English paternity who is one of the Institute's specialists in educational theory and a disciple of Jerome Bruner. In 1962 the Warsaw superintendent of schools asked the Institute to devise a research plan which would lessen the difficulty of articulation between grades V through VIII in the basic school system. The superintendent provided a school and the Institute placed Prof. Fleming in charge of the experiment beginning with the 1963-64 school year.

Prof. Fleming proceeded on the axiom that the basic school of eight grades and the secondary school of four grades had to provide the huge majority of Polish students with all they need to know in order to function adequately in society. Believing that the old methods of text-reading and drill should be supplanted by more active pupil participation and better integration of material, Prof. Fleming took what he calls "the best elements of Progressivism and Essentialism" and molded them into a four-stage method: (a) structuring the content into logical sequences, (b) utilizing the concept, but not the machinery, of programmed learning by arranging lesson content in steps leading from concrete to abstract, or vice versa, so as to require problem solving at each step, (c) presentation of the material by means of several techniques, and (d) evaluation of results.

All the teachers are said to know and practice this method. The teachers of a given discipline such as language or mathematics are organized into a "subject collective" which meets formally five or six times a year (and often informally) to discuss, criticize and find means of improving their work. In addition, there are several meetings each year of the "school collective" which is composed of all the teachers of all subjects. In both types of meetings, specialists from the Institute, the University, or other organizations appear as consultants and lecturers. In the first year of the project, only Polish language, mathematics, and science were included, and only seven teachers took part. Now thirty teachers in all subjects in grades V-VIII participate. Promotions to the next grade stood at 90.2% at the beginning, rose to 93.7% in 1963-64, to 94.5% in 1964-65, and to 97.2% in 1965-66, with some of these failures due to illness. Compared to several other good schools in Warsaw and elsewhere, Prof. Fleming calls this promotion rate "amazing, especially in mathematics." Also, he declares that his school, because of its four-year record of achievement, should no longer be called "experimental" but "model" since his methods are rapidly being adopted in other schools.

3. Not all the research work of the Institute is connected directly with experimental schools. One example is the Section on Didactics headed by Prof. Zofia Cydzik, who is also a specialist in the teaching of mathematics. The mathematics text and teachers manual prepared by this section (Matematyka w cwiczeniach dla Klassy III, Warsaw 1964, pp. 322) is used in ninety schools in Lublin, a city in southeastern Poland served by the Warsaw Institute. A revision of this work is now being written which may be used in all the schools of Poland. The main aim of the text, says Prof. Cydzik, is to lead the student to think in logical terms and to solve problems for himself. The approach is the "programmed" pattern: the content is arranged in "frames" so as to offer the maximum amount of data; progress is from single simple concepts to larger and more complex ones. Starting with the "psychological moment" (the level of the child's knowledge of the material and understanding of his own abilities, this systematic presentation should enable him to see the connections between past and future lessons. The true test of learning is for the child to apply this knowledge in new situations.

This same section also deals with the teaching of Polish language, the only subject which equals mathematics in importance in the Polish eight-year curriculum. Since these two subjects have long constituted the main barriers to next-grade promotion (more pupils fail one or the other than any other subjects) the Institute has concentrated upon them in most of its studies in retardation, or failure to achieve promotion. The research of this section resulted in the conclusion that, in order to reduce such retardation, three techniques must be adopted. First of all, the content of both textbook and teachers lecture must be thoroughly systemitized. Second, the method used must be problem-solving. Finally, the backward pupil must receive additional assistance but not during the regular class period when it could delay the progress of other students. One of the staff members of the section wrote her doctoral thesis on the application of these principles to two subjects, Polish language and Introductory Science. Her recommendations as to language were to teach more content earlier and better, to see language as the chief means by which the child learns his surroundings, and to teach oral languages as a pre-requisite to reading and writing. The task remains to make the learning of the latter as easy as the former, perhaps by beginning the formal study of reading before grade IV. In any case, as soon as the child learns to read he must be given ample opportunity to utilize his new skill. The teacher is warned not to teach all the grammar at once, but to teach each rule as it is needed. In regard to the teaching of science, the thesis holds that children learn more about physical phenomena through television than they do in school, and transfer this knowledge more readily to new situations. One reason offered is that learning in school is largely verbal, while television is both verbal and graphic.

4. This last conclusion was taken up for consideration by still another section of the Institute, that devoted to the educational use of television, radio and films and headed by Yanina Koblewska. Her own research fully supports the value of these media in schools, and she expects to publish in the near future the results of a poll taken among several thousand teen-age Polish students who seem to favor learning by these graphic methods to the usual classroom method of textbook, exercise and drill. Mrs. Koblewska feels that, when properly used, these media can be just as effective, and much less expensive, than the machinery of programmed learning.

B. The Pedagogical Faculty at the University of Warsaw

In Polish universities, deans of faculties are elected for two-year terms and cannot serve more than two such terms. Since this reporter's acquaintance with this Faculty has been more or less continuous since 1959, he has known three deans: Wincenty Okon (1957-61), Ryszard Wroczynski (1961-65), and Dean Tomashevski (1965-69). It is interesting that none of these is a member of the Party, and also that no law requires that even rectors of universities be members, although all seven do belong. In April 1967 Dean Tomashevski was very busy and asked that all questions about the Faculty be asked of Prof. Pasierbinski. The report of two such interviews follows.

1. Although Prof. Tadeucz Pasierbinski is chairman of the Department of Educational Theory, his own field of specialization is school organization and administration and his personal interest centers on education in industrial societies. For this reason his comments are broad in scope but are reported here in full because of his high political status in the ruling Party, and also because of his obviously keen intellect. The five persons on his immediate staff are supplemented by three bright young aspirants who divide their time between their own thesis projects and research assistance to their seniors. All eight persons do research in teacher education, but three concentrate upon systems of school organization, three upon comparative methods in education, and two (including Pasierbinski) upon the political aspects of educational planning and development.

The chief problem in teacher education in Poland, according to Prof. Pasierbinski, is the extension and improvement of the period of preparation. Secondary teachers must complete either a university or a higher pedagogical institution, while elementary teachers need finish only secondary school plus a two-year course available at sixty locations throughout the nation and also through correspondence. In the near future these courses will be increased to three years, and it is hoped that by 1975 or 1980 elementary teachers will have the same amount and quality of education as the secondary teachers. Their weekly hours of work will also be lessened: in 1967 it was reduced from 30 to 26 and should decline to 21 in the next decade and to 18 in 1987. Even now their salaries are based on 1100 zloty a month for 18 hours per week, with 400 zloty supplements for the extra hours, bringing the pay of elementary teachers to 1500 zloty a month, plus a small allowance for residence costs and 500 zloty additional for principals. In contrast, secondary teachers receive 1820 zloty for 21 hours per week, holders of the master's degree get 2000 zloty and of the doctorate 2300 zloty a month. Since the average monthly wage of all workers in Poland is said to be 2000 zloty, it is easily understood why only 25% of elementary and secondary teachers are men. Thus, in order to fulfill the desire to attract more men as teachers, the leaders know that salaries will have to be substantially increased. However, no concrete plan in this direction was mentioned in the many interviews in Poland.

At the university level the salary situation is much better, and men far exceed women in the Pedagogical Faculty at Warsaw University, which enrolled 2300 full-time and part-time students in 1967. On the basis of six hours of teaching a week, monthly salaries for docents (assistant professors) average 3000 zloty, for extraordinary (associate) professors 3600 zloty, for ordinary (full) professors 4000 zloty, and for department heads 4700 zloty. Since overtime teaching is paid for at the same rate, and since royalties and consultation fees are common perquisites of at least the two upper ranks. Prof. Pasierbinski says that senior faculty often have incomes of 7,000--10,000 zloty a month, or between five and six times the salaries of elementary teachers. One advantage of this discrepancy, perhaps, is that the universities are easily able to attract the most qualified teachers in the nation.

One interesting idea for the future did emerge from this interview. Already in the planning stage is a new department in the Faculty which will train school inspectors, and it is hoped that this effort will ultimately result in a large international center in Warsaw to serve all the countries of Eastern Europe and perhaps some in the West also.

2. The Copernicus Secondary School in Warsaw does not enjoy the official sponsorship of either the Institute of Pedagogy or the Pedagogical Faculty of Warsaw University, but it does receive considerable assistance from the latter, on an informal basis, through book loans, visiting lecturers, and the many Faculty members whose children attend. The headmaster, Jan Dobrowolski, explains the absence of the Institute as due to the fact that it does no research in the teaching of foreign language, and his school, since its opening in 1963, has been devoted to the mastery of the English language. (He is proud of the fact that, in the succeeding four years, the Ministry of Education has set up

similar schools in Russian, French and German). The school prepares young people in grades IX through XII for future occupations which require an excellent command of the English language, such as tourism and foreign trade, but many pupils go on to a university for study toward a profession in which such knowledge is of great value. Four subjects are taught entirely in English: geography, chemistry, physics and biology. The textbooks for these courses are in Polish, however, because so far it has been impossible to obtain, by purchase or otherwise, sufficient copies of the texts in English. The headmaster hopes that a way may someday be found to remedy this situation. There is a required entrance examination in English grammar and sytax (written in Polish) which most students with prior three years of study in English pass without difficulty, and some even with one year of intensive study.

The grade X class in Geography observed by this reporter was conducted entirely in English. The theme was "Early American Indians" and the lesson was conducted entirely by the class; the teacher remained silent throughout the entire 45-minute period. One girl gave a prepared 30-minute report on the theme, several students interrupted with questions, and the final quarter of an hour was given over to general discussion of the topic. The students and the teacher, after the lesson, expressed a desire for more material on American history and geography. It was explained that all of the teachers in the school have visited England for long or short periods, and therefore the school library has a great deal of printed and illustrated volumes on that country, but very little on America.

3. The Studium Nauczycielskie No. 1 in Warsaw Before describing the function of this institution, a brief statement must be made concerning the total system of teacher education in Poland. Of the seven universities, only those in Warsaw and Lublin possess Pedagogical Faculties, and their chief function is to provide teachers of specific subjects in the secondary schools, grades IX through XII. Another service, however, is to supply well-trained teachers to the three other types of teacher-education establishments, namely: (a) the five Higher Pedagogical Schools (one of which is reported later in this chapter) which train only secondary teachers; (b) the 109 Pedagogical Lycee offering a five-year course to graduates of the basic eight-year school who wish to teach in the basic schools (beginning in 1971 these institutions will also specialize in training for pre-school work); and

(c) the 57 Studia Nauczycielskie which have two-year courses for prospective basic-school teachers who have had at least eleven years of schooling.

The Studium Nauczycielskie No. 1 is an example of the last-named type. One of three such in Warsaw, it has 320 students full-time in day classes, 315 in evening (part-time) classes and 700 in correspondence courses. All of its faculty of sixty are university graduates and seven hold the doctorate, a situation which makes cooperation with the local Pedagogical Faculty a relatively simple task. The studium director, Mrs. A. Zowada, and the vice-director, Mrs. J. Brokowska, try to hold class size to forty in lecture courses and twenty in seminars. The three major programs are General Pedagogy, Mathematics and Science, and a combination of audio-visual and industrial arts courses. In addition, all students must take physical education and Russian language. Since Russian is no longer required in most schools in Poland, an attempt was made to learn why this institution made it mandatory. The best explanation offered was that many of the graduates would probably visit the Soviet Union and some would do graduate work there. No tangible evidence of Polish or Soviet political influence was discovered, especially since many of the other 56 schools of this type offer Russian as an optional course.

The program in General Pedagogy consists of four main subjects: theory of pedagogy, methods, psychology, and student teaching. Observation of classes continues throughout the first year, followed in the third semester by thirty hours of actual teaching of all subjects in grades I through IV. In the last semester, forty hours is assigned to teaching the student's major subject in grades V-VIII. In order to graduate, all students must pass the course in student teaching, but those who fail the first time are given a second opportunity to qualify for certification. The better graduates go on to university, but the great majority become teachers immediately after graduation.

There is much controversy over the future of this type of institution. While all educators want the two-year course to be extended, not all agree on the amount. Most of the university professors believe the program should be four years so as to take some of the burden from the two pedagogical faculties and the five higher pedagogical schools. But the Trade Union of Educational Workers feels that the present teacher shortage, particularly in mathematics and physics, does not permit an extension beyond three years because of the further delay of graduates entering the profession.

C. The Higher Pedagogical School at Krakow

One of the five such establishments in Poland, this institution is typical in that, while its main purpose is the preparation of secondary teachers, it does carry on research by individual faculty members and by faculty "teams." Its enrollment is 1700 full-time day students, 200 part-time evening students, and a remarkable 2500 persons in correspondence courses. (Several of the people interviewed, both here and in Warsaw, stressed the emphasis which the Ministry of Education is placing upon this aspect of training in all fields, not just in teacher education.) The evening school is new and experimental, enrolling only the more experienced people, most of whom occupy daytime administrative posts. The faculty consists of thirty-five full-time professors and docents, fifty adjunct or part-time faculty (all holding the doctorate), and fifteen lecturers who have either the doctorate or a master's degree. In addition, several professors from the Jagiellonian University serve in a visiting capacity. While most of the faculty teach in the Department of General Pedagogy, courses are also offered in adult, child and special education.

Every five years the faculty of the Department of General Pedagogy selects a major research problem and centers several of its courses upon this problem, thus involving a large number of students in research activity. For the period 1965-70, the focus is upon The Family as an Educational Institution. One of the projects undertaken under this theme is an intensive study of 500 Polish families who have recently moved to Novo Huta, a new industrial complex near Krakow. Many of these people had lived in West German provinces and "had been subjected to a great deal of propaganda." Mostly from villages and small towns, factory work and urban life are new experiences for them. Although the West German government provided a fairly high standard of living in most respects, these people learned that all education in Poland was free of charge and felt that their children would have greater opportunities, despite the possibility of language difficulties. In such cases the families must themselves learn how to assist in the process of orientation, and this project hopes to find the best ways of doing this.

Another project team is studying a remote farm settlement, still another the Silesian coal mining region, and in both these cases some students on the teams are themselves from the respective areas. In Krakow itself, a group is investigating the twenty coeducational "day nurseries" which provide part-time care for 640 adolescents aged twelve to sixteen, and where the problem is to learn why the boys are much more unruly than the girls. This particular project ties in with a larger study of coeducational problems in secondary schools, since many such schools were segregated until recently. Other teams are evaluating the efficiency of teaching in different types of basic schools, or analyzing several different systems of grading pupils. School failures are being investigated for causes, and already 80% have been found to be due to family disturbances such as alcholism, parental conflicts, or parental inattention growing out of both parents working. The officials of this institution believe that many social problems traditionally blamed on the schools are actually generated in the home, and that reform should start there in order to allow the schools to perform their appropriate tasks more efficiently.

D. The Pedagogical "Faculty" of the University of Lublin

This newest Polish university refers to its staff in pedagogy as a faculty, although it is still subordinate to the Faculty of Philosophy and History, and its head, Prof. Lech, is called a chairman rather than a dean. Nevertheless, the pedagogical staff appears to have a great deal of autonomy and operates in much the same manner as does its counterpart in Warsaw. Prof. Lech, another Polish disciple of Jerome Bruner, says that teachers in Poland are well acquainted with Western educational theorists (he mentioned only Herbart and Dewey) but do not know how to apply the theories in practice. The theories themselves are not adequate for the present day; therefore, for ten years he and other educators have been trying to develop an educational theory for Poland which will provide proper guidance, can be applied in practice, and can also permit practice to pass back into theory. Prof. Lech and his colleague in Gdansk, Prof. Bandura, believe they have made a real start in this direction by concentrating upon motivation, mastery of material, and recall. A very encouraging experiment was recently carried out with great success but, since it required a team of ten of the best teachers in the region and the constant supervision of an eminent pedagogue, the question of wide-spread use of the method remains open. It has, however, been extended to three basic schools around Lublin, with total faculty participation, and one of three leading theorists is assigned to each: Prof. Roman Suchodolski of the Academy of Sciences; Prof. Wincenty Okon of the Institute of Pedagogy in Warsaw (see the first section of this chapter); and Prof. Lech. The experiments at this level have been completed but the results have not yet been analyzed. Meanwhile, the three-man team has turned its attention to three secondary technical schools in the Lublin area, where particular emphasis will be placed upon curriculum construction, including programmed instruction.

1. One of these latter schools, specializing in the making of machines and machine tools, was visited. The course is three years with the prerequisite of eight years of basic school education. The 430 students, all boys, take courses in chemistry, physics, mathematics, physical education, Polish language, and a choice among Russian, German and English. Technical subjects fill twelve hours of the 40-hour week the first year, eighteen hours the second year, and twenty-one the final year. The average class size is forty but will soon be reduced. Dormitory facilities are provided free to 170 boys, but they must pay for their meals. The remaining students live in town and receive stipends to cover at least part of their expenses. The school has athletic teams but most contests are intra-mural. A full-time physician and a visiting dentist are staff members.

The majority of the thirty-five teachers are under thirty years of age and several are graduates of the school. The director has held his post since 1948 when he came from a job as foreman in a factory. He has had very little pedagogical training and seems to think that is enough. He admits only half of the boys who apply and is proud of the drop-out rate of 4%. The graduates of the school nearly always get good jobs in factories, and there is one Lublin plant where half the workers are alumni of this school. The products of the school, both whole machines and parts, also are purchased by local factories, with the proceeds going by law toward new equipment. Once in awhile, a small amount of this money is used to pay for a picnic or an excursion.

2. Another school under the guidance of the University pedagogues is the Prince Palawi secondary school of the gymnasia type. Here 300 girls and 201 boys in grades IX-XI occupy a fine old edifice constructed as a school in 1916 and now housing 54

classes a day. The curriculum is of the usual order for such schools, with great emphasis placed on language instruction in the required Polish and elective Russian, German, English and sometimes Latin. However, in accord with the national emphasis on science and mathematics, the faculty of twenty-eight well trained teachers is attempting to find a workable middle ground between humanistics and science, and the newly equipped laboratories are among the finest in the country. The biology laboratory is actually a regional museum, with fine specimens of the flora and fauna of the Palawi district. There are 12,000 books in the school library, the medical and dental care includes a full physical examination of each student every three months, and a dormitory houses 150 of the students who live too far away to commute daily. The annual budget exceeds two million zloty, a relatively generous fund for this region. One result is that 80% of the graduates continue their studies in institutions of higher learning throughout Poland, many in medicine and pedagogy.

3. Since Lublin University has no Psychology Department, the only research or teaching in this field is educational psychology under the direction of Prof. Lech. A married couple, Prof. and Mrs. Jozef Reutt, are currently carrying on a project concerned with motivation in elementary and secondary schools. They have developed certain working hypotheses, such as: (a) all students want to finish school, (b) students believe their education has real value, (c) they want good grades, and (d) they want to have an occupation. The Reutts see human WILL as the driving force operating on the individual level, the social level, and the moral level which is a combination of individual and social. Proceeding on these assumptions (whose validity is questioned even in Poland), they have organized twenty-seven master's and doctoral candidates to explore such motivational problems as the role of the assigned task, the personal interests of the pupil, and the value of independent activity. The list of themes on which one or more of the twenty-seven researchers are working reveals the enormous scope of the total project on motivation, but it was impossible in one interview, even though conducted in English, to evaluate the amount of progress made nor the value of the findings. The list is furnished merely as an example of faculty-student cooperation in multiple-team research in a Polish university.

(a) normal, subnormal and abnormal thinking
(b) re-education and re-socialization of delinquents

(c) processes of education in medical and technical schools
(d) fatigue in physical and mental labor
(e) humanization of labor in its personal aspects
(f) the "way of life" of the secondary school graduate
(g) the timid and lonely child in the family
(h) school conflicts (i) the purposes of education

The directors of the study feel that some good will come of these projects even though the research is being done, in some cases, by rather young and inexperienced graduate students. The Reutts hold that so little university research in education involves participation of the pupils or students in groups, and that their project is of significance for this reason alone. It is certainly possible that out of all this apparently scattered effort there might emerge data which the Reutts themselves can put into scholarly and logical form. In any case, the final report on their conclusions will be eagerly welcomed, both by their antagonists who have little faith in such methods of research, and by their supporters who feel that any serious investigation of the elusive problem of motivation should be encouraged.

E. Summary and Conclusions on POLAND

Although still a largely agrarian country, Poland has brought about a healthy balance in its economy, partly through the mechanization of agriculture and the abolition of Soviet-style "collective farms," and partly through building new seaports on the Baltic Sea which permit a once land-locked nation to expand its foreign trade. In addition it has modernized a long-notable Academy of Sciences, established a centralized and efficient research Institute of Pedagogy, spread a wide network of schools of all types throughout the nation, and provided generous budgets for education at all levels. Theoretical research in education is encouraged, but the application to practice is an essential product. A remarkably good job has been done in bringing theorists and practitioners together, particularly university professors in several disciplines, instructors in teacher-education institutions, and classroom teachers at both elementary and secondary levels.

The status of the teaching profession as a whole has profited from these working contacts. Pedagogy, while perhaps not equal in professional prestige to Medicine and Law, is certainly highly regarded in the departments of the humanities and the sciences. Several pedagogues are full members of the Polish Academy of Sciences, and most of those encountered in the preparation of this report were obviously men and women of high intellectual calibre. Elementary and secondary teachers receive much lower salaries than do university professors, but some of the rancor usually stimulated by this situation is vitiated by the social and academic acceptance of the former by the latter. Both in Warsaw and in Lublin, the professors were thoroughly familiar with school programs in their district, and school teachers regularly attended faculty meetings at the universities.

What, then, holds Poland back in its truly admirable efforts toward large-scale improvement in its educational system? Certainly one barrier is the bureaucratic and doctrinaire political apparatus, which can summarily dismiss scholars from official posts, expel students on vague charges, and prevent the most carefully planned reforms from achieving fruition. The practice of permitting non-Party people to occupy rather high positions in the academic establishments is commendable, but it can also be a means of excluding them from the real policy-making bodies in education.

Part II YUGOSLAVIA

A. Secretariat for Education and Culture of the Federal Executive Council of the Federal People's Republic of Yugoslavia.

The spokesman for this agency was Rudoljub Jemuovich, now its second of officer but formerly chief of the corresponding agency for the Republic of Serbia. He explained that each of the six republics in Yugoslavia is a different nationality and therefore is permitted considerable autonomy in cultural matters, including education. For instance, he said that he had much more actual authority as a Serbian secretariat official than he now has in the Federal office. However, the country is one nation and must have some laws which over-ride this autonomy in order to achieve unity. As an example, he cited the law which permits each republic to define its eight-year basic school system in terms of administration, organization, curriculum, etc., but it must be an eight-year school and conform to the pattern laid down by his present office. Native Language and History courses are different in each republic, but all must offer a general history of Yugoslavia and all except Macedonia and Slovenia accept Serbo-Croatian as the language of instruction; these two republics also use Serbo-Croatian to some extent, largely because it is the official language of the Army. Yugoslavia's recent moves toward further decentralization is for the purpose of destroying old concepts left by the Turks, the Hapsburg's and the Nazi occupation. The hope is that this decentralization will ultimately result in greater unity, as it has in the United States. Mr. Jemuovich does not think that the common language of English is the root of national unity in the USA, but that it is the fact that our economic system is unified because of 90% industrialization and private property. He believes that his country can achieve the same unity through a combination of industrialization and socialization of property. Even in the finance of education, some decentralization exists. About 13% of the salary of each worker in Yugoslavia is deducted at the source for all taxes. Of this amount 2.5% goes to the Federal budget, 2.5% to the Republic budget, and 8% to the local administrative district which uses most of it for schools. The Federal budget assists the localities only when their local funds are insufficient. In large wealthy centers such as Belgrade, little or no money for any local purposes is required from this budget.

B. There are two major research offices located in Belgrade, and they so often cooperate on projects that it is difficult to determine the chief source of sponsorship. Since this report is more concerned with the types of research being done rather than with the particular agency involved, it seems appropriate to put the work of the two institutions together, after pointing out the differences in their structure and administration.

1. The Yugoslav Institute on Problems of Education was founded as a temporary agency in 1955 for the sole purpose of organizing data for the projected national school reform of 1958. Its service in this connection was so valuable that it has retained its functions in a new program of continuous school reform. Its director, Dr. Dragutin Frankovic, is an internationally known scholar in the fields of educational history and comparative education, and his assistant, Mrs. Levy, is fully capable of managing the Institute during the frequent long absences of Dr. Frankovic on official missions in Yugoslavia and abroad. Both these scholars feel that the chief problem in education, not only in Serbia but throughout the nation, is the reform of the secondary schools of both types. The gymnasia are too general and theoretical in their approach to education, and the specialized secondary schools are too narrow and too technical. New industries need people with both kinds of school experiences, and several new ten-year experimental schools are setting the pace in the proper direction.

2. The Serbian Institute for Educational Research was founded in 1961 and has also been headed ever since by outstanding scholars. The first director was Dr. Fridrih Troj, now director of educational measurement and research for the Belgrade city schools, who is credited with giving the Institute the "research heart" which it retains to this day. His successor in 1963 was Dr. Ljobomir Krneta who left the post in 1966 to divide his time between research for the Academy of Science and active promotion of school reforms through his presidency of the Trade Union of Educational Workers of Yugoslavia. (Interviews with Dr. Krneta and Dr. Troj will be reported later in this chapter). The present director is Dr. Dragan Krstic, one of the nation's outstanding educational psychologists.

3. The research done by both these institutes is organized according to the nature of the project. Some research is on a large-team basis, some is pursued by small groups, and some by individuals. Some examples of recent group or team research are (a) an educational dictionary published in 1967 is actually an encyclopedia of pedagogical and psychological terms and concepts; (b) a children's dictionary due for publication late in 1967 pays particular attention to words used differently in rural and urban settings; (c) a history of women's education in Serbia is being directed by Dr. Alexander Banovic, who is also writing a book on education in West Africa on the basis of his three years of teaching there; (d) research for a history of education in Serbia (still under the general direction of Dr. Krneta) is being carried on in the archives of Vienna, Berlin, Budapest, Moscow, Athens and Sophia; (e) in cooperation with Dr. Janez Vipotnik, director of the Institute of Social Sciences, a team drawn from all three institutes is working in the area of moral education of young people. Team studies of a more practical and immediately applicable nature are also in progress, such as (a) development of an intensive program of mathematics teaching through the earlier introduction of the subject to the child, a project modeled on the work of Prof. Zankov in Moscow and being done in collaboration with the Institute for Educational Research in Ljubljana; (b) methods of encouraging and guiding the process of self-education in children, which will supplement a study published on this subject in 1966; (c) the use of programmed learning techniques, especially in mathematics, in order to use books rather than machines (which Dr. Krstic believes will prove ineffectual in the long run); and (d) the role of "mind-set," or proper preparation of the pupil, in making lesson assignments.

4. Some examples of individual research sponsored by the institutes, already completed and ready for publication, can be described as follows:

(a) "The Character and Structure of General Education of Our Times."--The paper discusses the main problems in this field such as: Culture and education, origin of modern general education, general education and national culture, anthropological determinants of man, science and scientific methods in the framework of general education, modern technical civilization and general education, arts in the framework of general education, social studies and general education, attitudes and general education, humanistic and scientific components of general education, relations between general education and professional training.

(b) "Learning by Problem Solving in the Elementary Teaching of Physics" (Experimental study).--The study is the result of longitudinal verification of the didactical value of problem-solving techniques in teaching 13.5-year-old subjects in elementary physics (7th grade of elementary school). Experimental factor (problem solving) is presented in the form of special experimental programs showing high degree of superiority versus usual method of teaching. Statistical significance of difference in mean scores is about 3.30 on the level of 0.05. Very good results are obtained in solving test items of problem or reasoning type.

(c) "Improvement of Reading."--A book on the learning process as a teaching aid and additional source of knowledge. Problem of reading, practical work with children and adults, school libraries, study of reading interests.

(d) "Perception of Graphical Symbols of Spacial Forms by Our Pupils."--This book emphasizes the importance of technical training in school for the general "productive ability" of the pupil. There are differences in perception due to occupational background: factory workers grasp graphic symbols more rapidly than verbal symbols, and the difference is greater between big factory districts and rural areas. Therefore, farmers have great difficulty adjusting to methods of technical education.

(e) "A Contribution to the Study of Quantity of Time Used for the Consolidation of Knowledge, Skills and Habits in Primary School Teaching."--The work represents an empirical investigation carried out in 262 classes of the primary schools in Serbia. The investigation covered all the subjects of sciences and social studies. The paper consists of 160 pages, 16 tables and 21 graphs.

(f) "A Contribution to the Study of Pupils' Moral Qualities with the Emphasis on the Assessment of Conduct in Our Schools."--Possibilities and difficulties of studying the character in personality, a study of character in personality in the past and in the present time, construction and application of the rating scale "Rate yourself and others." The paper consists of 270 pages.

C. The Department of Educational Measurement and Research is attached to the Secretariat for Education for the city of Belgrade, a different agency from the one reported on at the opening of this chapter. Its representatives at the interview were Dr. Fridrih Troj, the director, and Dr. Ranko Radovanovic who is in charge of research. The department was originally set up in the Secretariat to provide a link between the highly theoretical research in education being done by some agencies and the practical and applied research carried on by others. (This is recognized as a major problem throughout Yugoslavia because there is no agency, such as an Academy of Pedagogical Sciences, to unify the work of the numerous agencies engaged full-time or part-time in educational research). At first there was no plan for this department to do any research on its own, but in 1963 the problem of articulation between grade VIII of the basic school and grade IX of the secondary school in Belgrade was brought to the attention of the Secretariat, and Dr. Troj was transfered from the Institute of Educational Research to the project.

Quantitatively, the situation certainly warrants special consideration. With a total population of about one million, the city has 157 eight-year schools with 80,000 pupils and 18 secondary schools with 40,000 pupils. In all, there are 9,000 teachers and 34 subject-matter counsellors who link the schools with the Secretariat. While most of the basic schools have identical curricula and prepare pupils to continue in the 15 ordinary gymnasia, a few basic schools offer special courses for those aspiring to enroll in the single classical gymnasium (four years of Latin and Greek are pre-requisite to admission), the sole math-science gymnasium, or the one for training in industrial design. Admission to these specialized secondary schools created no problem because proper preparation was provided and special entrance examinations were required. The difficulty was with the graduates of the unified curriculum who wanted to enter the ordinary gymnasia. A team of four scholars under the leadership of Dr. Troj began their investigations.

It was discovered early that 40-60% of all pupils in grade VIII could really be called under-achievers if judged on the basis of their retention of eight years of subject matter, while 7-10% of the same group were over-achievers. The search for causal factors revealed that social and cultural backgrounds of the children were far more important than was their mental ability. It is impossible in this report to trace the many steps taken by this group to reach their practical conclusions, but the remedial measures which began in September 1967 are worthy of note. First, entrance examinations were required in the fifteen secondary schools which had not used them heretofore, although the exams were only in the two subjects of mathematics and Serbo-Croatian. In addition, the senior classes in the gymnasia, and all students in vocational schools (a total of 12,000), were given the same entrance exams in order to test their retention of the basic school curriculum. For selected groups, general achievement tests were given and the results coordinated with I.Q. scores. Certain tests (not available to this reporter) were given to teachers to measure their own abilities and achievements, and salary increases depended upon the results; automatic raises were abolished. However, more courses for raising qualifications were opened for teachers in order to assist them toward higher marks on subsequent exams. Since this reporter left the country before these measures went into effect, and since no published report has come to his attention, it is impossible to disclose the reaction of the teachers to the new reforms.

Other projects on which the staff of the Department (and personnel borrowed from other agencies) are now engaged are (a) extended-day schools for pupils from families where both parents work; (b) experiments in teaching foreign languages, in colloquial form without grammar, in grade IV or earlier--even kindergarten; (c) improvements needed in basic eight-year curriculum, even though it is deemed satisfactory as a whole; (d) certain problems of individual social conflicts, particularly among children of the well-paid intellectuals, which impede the socialization process, and (e) investigation of the claims of university professors that entrants from vocational secondary schools are poorly prepared, that while they do better than others in the first year they fall behind before graduation. This last problem involves the nation-wide, and perhaps world-wide dilemma:

what is the correct balance between the vocational and the general content in the secondary curriculum? In this case, however, some of those interviewed in Belgrade raised the possibility that it is the university curriculum which needs reform. When this viewpoint was mentioned at the next series of interviews, it provoked nothing but expressions of amused tolerance.

D. Departments of Psychology and Pedagogy at Belgrade University.

Here again is an example, typical of Yugoslavia, of two groups of scholars separated by the formal administrative structure but working so closely together that it is not feasible to report on their projects except as collaborative efforts. Except for Dr. Nikola Potkonjak, a specialist in comparative education who is also a member of the four-man team at the Secretariat mentioned in the preceding section, all of the members of the department of Pedagogy who were interviewed engage from time to time in research with the Psychology staff. The affinity between psychologists and pedagogues was established long ago: both groups collaborated in the founding of the Society for Child Development in 1906 (under the influence of G. Stanley Hall) and published its official journal together until 1912. When the several purely research agencies were established in the 1950's and early 1960's, they drew to themselves most of the research projects formerly done by the universities but, in the field of education, the interdepartmental cooperation has been so successful recently that the more important problems are once again being assigned to the institutions of higher education. The belief is wide-spread that researchers with considerable recent teaching experience, or those who carry on research and teaching simultaneously, are more likely to perceive both the theoretical and practical aspects of a project than the professional full-time researchers.

The professors from both departments admit that the pedagogues look to the Soviet Union for guidance in the subjects and methods of research, while the psychologists are oriented to the West. Also, the former tend to be more theoretical, the latter more empirical. While there was absolutely no evidence that either of these tendencies were created by any force other than the free choice of the professors, it does appear that this bifurcation exists and may actually be beneficial to the research program as a whole. The researchers work as individuals or in teams, depending upon the nature of the project, the amount of travel involved, or the speed required for completion. In addition to the regular salaries received the researchers get full expense allowances and share in the royalties from the sale of the publication. The main projects on which the two departments are now engaged can be summarized as follows: (a) "school-readiness," the question of whether all children should begin school at the same age and how the home and pre-school agencies can expedite the process of preparing for school; (b) creative thinking, which not only permits the child to better express his individuality but also helps him to retain interest in school work; (c) the advisability of acceleration of the pupil in school in view of the chances of resulting emotional and social conflicts; and (d) the entire developmental process of children seven to fourteen years of age. All the people concerned with these projects were pleased to admit the great influence on their thinking of William James, John Dewey and the Gesell-Ilg-Ames experiments.

E. The Trade Union of Educational Workers is becoming a vital force in Yugoslav educational theory and practice for several reasons. First in importance is that it is the only agency, aside from the Federal Secretariat, which offers the teachers of the entire country an opportunity to think of themselves as members of a national profession, rather than as Serbian or Slovenian or Macedonian teachers. Secondly, it is a true professional organization in that it carries on serious research which supplements, and sometimes complements, that of the several other agencies involved. Third, it is composed of all the teachers in all the schools and is often able to mediate the conflicts arising from vested and narrow interests in purely elementary, secondary or higher education. Last but not least, it is now headed as a national organization by one of the most distinguished pedagogues in Eastern Europe, Dr. Ljubomir Krneta, whose career has included the direction of the Serbian Institute of Educational Research, the co-authorship of the standard textbook in Pedagogy, membership in the Yugoslav Academy of Sciences, and recognition as the leading historian of Serbian education. (It is noteworthy that the Yugoslav Institute on Problems of Education is also headed by an educational historian, Dr. Dragutin Frankovic, formerly professor of that subject at the University of Zagreb.)

Dr. Krneta believes that the major task of his organization at present is to apply itself to the problem of reorganizing the secondary schools. Since this would mean changing certain school laws on a federal scale, he feels the trade union is in the best position to influence such legislation. More different types of secondary schools must be established, he says. At present Yugoslavia has only two types: one devoted to the traditional humanistic-social curriculum, and the other to mathematics and sciences, mainly biology, chemistry, physics and geometry. It is widely recognized that the nation needs young people skilled in productive trades, but tradition and prestige factors still dominate the thinking of most parents. Many university professors also believe the old type of gymnasia should be continued, with a few modifications, of course. Opposed to this view are engineers, factory managers, and vocational school faculties who feel that all secondary education should be purely functional and practical. Dr. Krneta takes a middle ground in this controversy. Since the curriculum of all schools should satisfy both the personal interests of the student and the societal needs of the future, a program could be set up to combine humanism with modern science and to teach mathematics and science as liberal subjects. One experimental gymnasium of this type was opened in 1966 in Belgrade and others are being planned. Another possibility is that a one- or two-year intermediate course might be set up between the basic eight-year school and all types of secondary schools. But, says Dr. Krneta, it must be borne in mind that the curriculum and methods of this basic school will influence not only which kind of secondary education the pupils select but also their progress at the higher level. The great problem during the earlier years is motivation toward more and better education. Despite all kinds of awards for excellence in the basic school, including diplomas with special honor, many graduates have no clear idea as to the secondary course they should pursue, and far too many have no interest at all in further schooling. Here again, greater opportunity and wider choice will probably generate greater motivation.

F. Belgrade Gymnasium No. IV was founded in 1961 but in September 1966 moved to a new building (on Theodore Dreiser Street) which had been especially constructed for the teaching of foreign languages. Describing the work of the school was its director, Mrs. Olga Micic; the head English teacher, Mrs. Vera Galovic; a Russian teacher, Mrs. Liljana Poznanovic; and Mr. Zivojin Mirkovic, teacher of physical education. Every one of these people appeared outstanding in ability and claimed that all forty of the teachers were as well qualified. There are 760 students who take the same courses the first year but in the last three years point their foreign language study (English or

Russian) in the direction of either art and literature, or the social sciences such as history and geography. Physical education is required all four years but sports are optional and seem to be of minor interest to the faculty at least. Great stress is placed on academic achievement; a student can fail and repeat a grade over but no more, and that only in the first year. Formal lessons are held 34 hours a week with extra-curricula and club work, even though connected with language study, as additional time. From December to May the graduating class has a diploma-research project in addition to regular classes. Requirements are a 25- 50-page paper on a famous foreign author, a final examination of ten questions in the major field, and a 30-minute oral synopsis of the research paper to the class. The one class observed by this reporter was conducted in a competent but traditional manner: drill on text material, correction of homework, discussion of rules of grammar (sequence of tenses), oral reading of the textbook in English. There is no denying that the school has an excellent record. In June 1966 the entire graduating class of 130 took matriculation exams for university and only ten failed.

G. The Electrotechnical Secondary School named for Nikola Tesla represents excellence in the other type of secondary institution. The principal, Mr. Dobrasov Golubovic, heads a staff of 130 teachers serving 2500 students in two shifts a day. The school prepares semi-skilled workers for the electrical industry and is the only one of its type in Belgrade. However, there are five other schools in the city with other industrial specializations, fourteen in Serbia and perhaps fifty in the whole country. Graduates of the eight-year schools take entrance examinations in Serbian language and mathematics, and their science grades of the last three years are considered in admissions. In this school, three "cycles" are offered: (a) general education in history, economics, foreign language, and Yugoslav literature; (b) the basic sciences of mathematics, physics and chemistry which continues for three years, and applied subjects such as electronics, radio-technics, etc., in the fourth and final year. Hours of study are 36-38 per week, or slightly more than in traditional gymnasia. Also, summer jobs are required the first three years. The weaker students get special help and are directed toward work in the radio industry, the good students turn to telephone and telegraph manufacture and maintenance, and the best students specialize in electronics. A final examination is comprehensive but stresses one of these fields. Graduates are eligible to go on to university if they can pass the entrance examinations there, but the huge majority take posts in industry, where, after six months of apprenticeship, they become fully qualified workers.

The students have many opportunities to learn about other matters than mastery of industrial skills. There are two student organizations within the school, one being political and optional for those who aspire to join the Yugoslav League of Communists, the other required and charged with maintaining student discipline. The latter is set up on a classroom basis, elects a secretariat which in turn elects representatives to a Council which has charge of all student affairs. This Council has approved seventy clubs of such types as dramatics, music recitals, theatre parties, discussion groups, visiting lecturers, intramural sports. Not only do such activities help to organize the student's free time, but they also provide him with valuable information outside his perhaps narrow field of specialization. The staff is qualified to assist in all of these endeavors: of the total 130, a hundred hold university diplomas, forty-eight are graduate engineers, and three have the equivalent of the doctorate.

All fifty schools in this category must be sensitive to the needs of the local and regional communities. If the needs of industry change, so do the subjects in the third cycle, but not those in the first two cycles which are mandated by the Secretariat of Education in the respective republics. For their part the industries often provide *funds for the living costs* of indigent students and contribute toward the purchase of school equipment. During their four years of study, the students often visit the local factories, or work there part-time or in summers, and thus gain real practical experience even before they graduate. Many of the visiting lecturers at the school are from the local factories, and often the reciprocal favors are formalized by contracts on a long-term basis. The leaders of this kind of vocational education keep one question constantly in mind: How can these schools serve better the community and the industry? There can be no doubt that the total program of such schools brings the students closer to the realities of modern life than does the often highly theoretical study in gymnasia. The question which the tradition-minded pedagogues ask, however, is: Should not secondary education (which is terminal for most Yugoslavs despite the relatively large enrollment in higher institutions) be concerned also with the hopes, aspirations and plans for the future well-being of the society as a whole.

H. The Higher Pedagogical School in Belgrade

In order to teach in the first four grades of the basic school in Yugoslavia, persons must have graduated either a five-year Teachers School or a four-year gymnasium with some additional pedagogical courses. Teaching in the last four grades requires an additional two-year course in a Higher Pedagogical Institute such as the one soon to be described here. If one wishes to teach any of the four grades of secondary school, except for some practical courses, he must graduate from a university which can be entered either from a gymnasia or from a Teachers School. For the purposes of this report the Higher Pedagogical School in Belgrade was selected for observation and description because its entrance requirements are almost the same as for a university (including an entrance exam in the major field, although occasionally it admits after three years of Teachers School) and its two-year course best reflects whatever concentration there is upon courses in education in the preparation of a teacher.

The director of the school is Mrs. Mila Stojnic and the head of the English department is Mr. Svetozar Brkic. There are 63 teachers and 1600 students. Three major programs are offered: (a) Serbian and a foreign language which can be English, French or Russian (four years previous study required); (b) mathematics and science; (c) music and art. The first program has by far the largest enrollment because Serbian is taught in all grades of the basic school and a foreign language is introduced in grade V. There are seven sections of English majors numbering 240, two sections of Russian with 60, and one small section of French. This reflects the situation in the 157 basic schools of Belgrade, where only one school teaches German and one French, while all the others provide both English and Russian. At this level English is much the more popular selection but in secondary schools, particularly the technical, students prefer Russian.

The three "cycles" which comprise the two-year curriculum are Psychology, General Pedagogy (more empirical than historical or theoretical) and Methods in the major subject. The last-named cycle is taught entirely in the student's major program and is based partly upon research studies and partly upon the actual experiences of the teachers. Observation of grades V-VIII in both city and villages occurs nine times in the course and actual teaching one day in the second year. Much time is devoted to class discussion of the observations and also to a critical analysis of the student's day of teaching. Lectures occupy most of the time in the first semester with classes of 60-120, but thereafter the seminar method is favored in groups of 10-15. Frequent excursions to local theatres, libraries and museums make students aware of community resources and, it is hoped, inspire them toward creative teaching in the future. Each semester there is one "Open-Door Day" when parents visit the school, and the faculty make frequent visits to the homes of the students. In general, the school appeared well staffed and well directed, but the low evaluation of all pedagogical study except methods was as obvious here as in most Serbian schools.

I. Educational Research and Practice in Zagreb

1. The Institute for the Advancement of Elementary Education, under the direction of Prof. Ivo Furlaw, is concerned not only with the basic eight-year school but also with pre-school agencies, elementary adult education, and vocational training of the handicapped. Before 1950 in Croatia the system was organized on a 4 + 8 basis with only the first stage compulsory, and only the best pupils went into grade V. The reform of 1950 created the present arrangement of eight years in a unified and compulsory school and the whole system, especially grades V-VIII, had to be changed fundamentally. Eighty experimental schools were set up by the Institute. Programs had to be formulated and results evaluated without the use of any kind of tests because they were forbidden by the Soviet-dominated officials. These schools were also used to try out new methods of using audio-visual aids, and to encourage pupil use of the school libraries which had previously been mere havens for tired teachers.

But all this was nearly two decades ago, and now the Institute is experimenting with programmed instruction and acceleration of the superior pupils. Another problem is posed by the teachers themselves. Brought up as they were by traditional and now out-of-date methods, they hesitate to make use of new teaching devices. Also, some schools have not yet acquired such aids, due either to lack of funds or lack of interest. In all such circumstances the Institute is carrying on reasonably successful projects such as special summer or weekend workshops to convert the teachers and principals, and money grants for modern equipment.

No matter how many gains are made in methodology, the main purpose of the Institute is still largely unrealized: the elevation of the quality of all basic-school instruction but especially in mathematics. Despite widespread laxity in grading students, ten percent repeat a grade at least once in their school careers and sometimes even more often. Half the school buildings in Croatia are more than fifty years old and half of these are one-room schools. Teachers are poorly prepared: it is estimated officially that 30% of the foreign-language teachers are seriously deficient in training. The staff of the Institute sees a lack of attention to educational theory (which was observed also in Belgrade) as the prime cause of the ineffectiveness of classroom teaching. They hope that the new Institute of Educational Research recently established in Zagreb will remedy this situation.

2. The Institute of Pedagogy in the Faculty of Philosophy at Zagreb University is not a research agency but a teaching staff which trains teachers for secondary schools. Faculty members present at the interviews were Prof. Mihajlo Ogizovic whose fields are educational history and comparative education and who is also Director of the new research institute; Dr. Boris Petz in educational psychology; and Dr. Vladimir Muzic whose specialty is methodology. They explained that there are now 20,000 students at the University which occupies a large area dotted with new buildings--a veritable "university park" right in the city. The philosophical faculty enrolls 2800 students and has more than 200 faculty members, only half of them full-time. Actual majors in education number only 120, but about 300 more take short-term or correspondence courses and often carry on research projects in the schools where they are already teaching. (Graduates of the two-year Pedagogical Academies are certified to teach in the eight-year schools).

Most of the education majors take two fields of specialization because two-thirds of them go into teaching where such versatility is highly desirable; the others work in libraries and museums. The majors take a course in Introduction to Pedagogy which meets two hours a week through the school year, plus one six-hours-a-week course in methods of teaching in each chosen field. Both courses are taught partly through lectures, but there is observation and student teaching in the methods course which is taught by subject-matter specialists rather than pedagogues. The latter group confine themselves largely to such theoretical areas as history and theory of education, didactics, and comparative and adult education. However, there is a good spirit of cooperation between this group and the Department of Psychology at the University, especially in research projects on topics such as (a) evaluation of achievement in school; (b) the number and length of tests and examinations; (c) the use of audio-visual aids; and (d) merit-rating systems for industrial workers. In some of these and in several other projects, the pedagogues also collaborate with the Institute which Prof. Furlan directs, and will undoubtedly extend the same courtesy to Prof. Ogizovic who is, after all, one of them.

3. Gymnasium No. 15 specializes in the Russian language but also emphasizes mathematics. Its director, Mrs. Pirker does not know Russian but certainly seems to know everything else about her school. She says that it is one of three specialized *gymnasia* in Zagreb, the others stressing English and Mathematics, respectively. Although careers in teaching are not deliberately encouraged above other professions, many of the graduates become teachers. Some go into clerical and office occupations, bolstered by elective courses in shorthand and typing. Since a second foreign language is required (French, Spanish, or Italian), all graduates have excellent employment opportunities also in translating or interpreting for tourist agencies, foreign trade enterprises, and diplomatic corps.

The course includes much study of Russian literature as well as grammar and composition. A class size of 16-25 permits new methods of teaching, and audio-visual techniques are utilized in all language classes at the ratio of 3 hours to 2 in textbook usage. The Russian texts are purchased from Moscow, and every effort is made to procure texts for geography and history in Russian or in the second language. Extra lessons are given all pupils who wish to have them and, in some cases of either poor or very fast learners, such lessons are required. Special events and national holidays of the Soviet Union and other countries are celebrated by songs and plays in the appropriate language, often written by the pupils themselves. Such high standards of performance seem reasonable if the admission requirements are considered. All applicants must take entrance exams in Russian and Croatian languages and score at least 80% on both. Since there are more applicants than vacancies, the only assurance of admission comes from high marks in other basic school subjects as well.

The teacher-pupil ratio is also ideal: 15/82 at the time of the visit (1967) because that was only the second year of the school's existence. In 1967-68 there was to be space for 72 more pupils and approximately twelve more teachers. The school does not face over-extension in size because no class can go beyond 26 in number. One more favorable item deserves comment: all the teachers are university graduates and all bear the title of "professor." With such pupils and faculty one should expect great success. The director is delighted that her staff is also intensely interested in putting into practice the recommendations of the research agencies. They welcome the forthcoming legislation which will standardize the basic programs and rules for all gymnasia in Croatia but will permit much latitude to the faculty on local issues. The teachers read the research reports in methodology and frequently invite the authors to give lectures at the school. They help staff a local research project in phonetics but reserve the right, shared by all teachers in Croatian gymnasia, to select or reject or adapt all research findings and rely on their own judgement and initiative in classroom teaching.

Since the director of this school is obviously a person of great ability, it is perhaps timely to mention the manner of appointment to such posts. First, the vacancy must be advertised for a week in the major newspapers, and a special commission makes the selection from the written applications and personal interviews. Basic requirements are (a) graduation from a university, (b) at least eight years experience in teaching, and (c) "political reliability."

J. The Institute of Educational Research in Ljubljana (formerly known as the Pedagogical Institute), is due for rapid expansion in line with its elevated status and responsibilities stemming from the change of designation in May 1965. At present it has a director, Mrs. Iva Segula, and four staff members. But many people assisted in planning the new agency and will continue as active participants in its work. Among these are several members of the Slovenian Parliament, the faculties of sociology, economics, law, politics, and criminology at the University of Ljubljana, the faculties at the local pedagogical academy and the one at Maribor, and the staffs of the thirteen regional and one central research institutes under the Secretariat of Education for the republic. With such wide and varied sources of help, Mrs. Segula feels confident that the Institute can accomplish the tasks set before it. Universal schooling will not be one of the problems because in 1969 Slovenia will celebrate the centenary of compulsory eight-year education.

1. The most important current problem is the intensification and rationalization of the instructional process in all grades. In addition to research done locally on this problem, the services of a Hungarian psychologist will soon be available and with him will be a Slovenian psychologist who has been working with him for more than a year in Budapest. The experiment will be tried out first in mathematics in grades I-IV, then extended to Slovenian language.

2. The second most pressing need is for better study skills in secondary school pupils. Dr. Vlado Schmidt, a University professor known for his books on the history of education and an expert on Soviet education, has taken charge of this project. He feels that the new demands of a technological age require new methods which will teach pupils to find their own answers to questions, most of which will arise after they leave school.

3. The dropout problem in Slovenia is not so serious in the basic or secondary schools but is causing concern at the University. Many students leave during or after the first year and Mrs. Segula and her staff are trying to create entrance examinations (none exist now) which will measure achievement potential and degree of motivation as well as the usual concrete elements.

4. As mentioned before, the eight-year basic school has long been in existence and its total role is fairly well defined despite

deficiencies in mathematics and native language. The purposes of the secondary school however, are still being argued in the profession and this level will soon undergo fundamental analysis. The shape of the future may continue the present Slovenian practice of equalizing general and specialized education, of balancing evenly humanistic-social and mathematics--science programs. Or it may force an imbalance in favor of technology. The Institute will play an important role in the final decision.

5. The status of the study of educational history in teacher education has been discussed briefly several times in this report but the interview with Dr. Vlado Schmidt and his colleague Prof. France Ostanek shed much new light on the question. Prof. Schmidt has already been mentioned as a prominent educational historian and his three-volume history of Slovenian education is regarded as a model of scholarship. Prof. Ostanek has also made unique contributions to the field with his Slovenian School Museum, created over a period of forty years and largely through his own efforts. Prof. Ostanek believes that textbooks such as his colleague produces have definite value for the older serious student, but he feels that graphic visual displays not only appeal to other students and the general public but clarify concepts of history in the minds of professionals. Together these historians have examined the values of historical studies as a part of teacher education and have come to certain common conclusions, which can be illustrated by an example. The two-year Pedagogical Academies are oriented to the purely practical aspects of teacher education and almost ignore history. But the University now requires of majors in education a full year's course which includes a fairly large block of time on educational development in the United States. The optional but popular course in comparative education concentrates upon current educational practices in the U.S. and the Soviet Union, but utilizes an historical approach to both.

6. Another neglected aspect of teacher preparation, according to Professors Schmidt and Ostanek, is the study of educational theory. Students should know that the past twenty years have seen two important changes in aims and methods. Objectives have shifted from a narrowly political-civic base to the achievement of the all-around, many-sided development of the child to emphasize his individuality. For Slovenian pedagogues, Marxism-Leninism is still the major theoretical guide but it is no longer a dogma. In methods, the major change has been from deductive to empirical, including a University course in educational measurement and statistics which could not have been offered twenty years ago. Here

the chief influence on Slovenia has been the United States. The two professors hope that this combination of quasi-Soviet theory and semi-American method may be the key to life in a socialized industrial nation which Yugoslavia fully intends to establish.

K. The Department of Pedagogy in the Philosophical Faculty at Sarajevo University is only three years old but the Faculty itself exists since 1952. The departmental staff is small, having only three active members, but it makes use of other Faculty personnel, particularly the psychologists. Otherwise it would be impossible, even in a four-year program, to teach courses in the fifteen fields of study which are offered, namely:

History of Education
Theory of Education
History of Philosophy
Contemporary Philosophy
Pre-School Education
Adult Education
Educational Psychology
Sex Education of Youth
Social Psychology
Child Development
General Psychology
Didactics
Educational Research and Statistics
Logic, Ethics and Aesthetics
several courses in Methods

Several additional courses will have to be given if a projected regulation goes into effect requiring a "school pedagogue," with a degree in education and psychology, as a member of the staff in every school instead of the present practice of having several such officials attached to the city headquarters. From the job description of this new post, it appears to approximate the combined duties of a director of instruction and a school psychologist. Nowhere else in Yugoslavia, or elsewhere, did this reporter hear of this type of school officer, but such novel ideas are consistent with the academic atmosphere in Sarajevo.

In matters of sex education, for example, Sarajevo University has given every encouragement to one of its younger professors, Dr. Petar Mandic. Dr. Mandic has written two books (see Bibliography of this report) and several project reports, and travels throughout Eastern Europe to promote his views on the necessity for sex education in modern society. He believes that the new permissiveness in sexual matters has eradicated the traditional restrictions and left no guidelines in their place. As a result, he says, young people of both sexes are left to find their own solutions through empirical methods with frequently tragic results. It is likely that much more will be heard of this professor.

L. Summary and Conclusions on YUGOSLAVIA

Yugoslavia has never been a true "satellite" of the USSR, although in relations with certain foreign countries it has followed the Soviet lead. It successfully resisted collectivization of agriculture, has permitted some peculiar forms of "socialist" private property, and long ago abolished the requirement of Russian language in the schools. Although its currency is not generally convertible on the international exchange, it has refused to follow other "Iron Curtain" nations in setting up "valuta" stores for the benefit of those residents who possess or obtain foreign money. Thus the absence of a "black market" is unique. It permits foreign capital investment and even foreign representation in "mixed companies" such as those which are developing the Dalmatian Coast resorts. In 1967, to celebrate International Travel Year, it abolished the visa requirement and has continued this policy to the present. There seem to be very few items which one is forbidden to bring into the country and very few which cannot be taken out, tax free. There is no declaration of currency required in either direction.

Most of the difficulties encountered by Yugoslavia--economic, political and cultural--arise from the multiplicity of its ethnic groups, which a rather benign dictatorship has not succeeded in melding into any tangible sort of unity. One frequently hears Tito referred to as "the only Yugoslav." Although little actual hostility seems to exist among the various groups and regions, there is certainly small interest in long-term cooperative efforts toward truly national ends. Years ago, all authority outside the League of Communists was decentralized, and in 1967 the League itself decided to abjure its dictatorial powers and stand only as a unified competitor in formulating and executing major policies. In the interview with the Chairman of the Federal Secretariat for Education and Culture reported earlier in this chapter, he explained how such further decentralization could be expected to bring about unification. His initial answer was the citation of Frederick Engels' three laws of dialectics. Later, however, he expounded the view that what his country needed was a basic economic unity which would transcend mere industrial, agricultural, political and cultural divergencies. Rather surprisingly, he took the United States as the supreme example of "e pluribus unum" because it had, early in the nineteenth century, established a unique but total capitalist system which had unified the world's most polyglot population, scattered over

3 million square miles of territory and governed by 200,000 local councils, into a cohesive unit. He was confident that his country's unusual brand of socialism would ultimately achieve the same goal.

The decentralization extends also to the agencies of educational research. That in Belgrade which is attached to the Federal Secretariat attempts to keep records on all current research throughout the nation but admits it is only moderately successful in this endeavor. One other agency in Belgrade is concerned only with Serbia and still another with the city itself. Those in Zagreb, Ljubljana and Sarajevo are almost totally occupied with the educational problems of their respective republics. The crying need seems to be for a system (not isolated units) of vocational schools which will prepare a largely agrarian people for conversion of the economy to at least a semi-industrialized stage of development. While vocational subjects already appear in the curriculum of the compulsory eight-year schools, and a large number of vocational schools have been set up for adults, the crucial need is for more institutions of the type of the excellent Nicola Tesla secondary school in Belgrade. Yugoslavia has more unskilled labor than it needs, a presently sufficient body of semi-skilled workers, and in higher education an enrollment of nearly 200,000--more per capita of total population than any nation in the world except the United States and the Soviet Union. Most of the officials interviewed are aware of this situation, and a strong effort is being made, particularly by the psychologists, to devise methods of instruction which will train skilled workers in a relatively short course--one or two years--to take their places in industry and also in the institutions of teacher education.

Part III CZECHOSLOVAKIA

A. The Research Institute for Pedagogy in Prague is an agency of the Ministry of Education and is under the direction of Dr. Miroslav Cipro and his assistant, Dr. Stanislav Maran, both of whom have visited the United States for long periods and are extremely well acquainted with our system of education as well as with those in the major nations of Western and Eastern Europe. A staff of about 35 well-trained people carry on the work of the Institute at its headquarters, and many others provide assistance in the ten experimental schools in Bohemia which are partly under its jurisdiction. The School Reform Act of 1964 demanded the "Modernization" of all general education at the pre-school, elementary and secondary levels, and this task has become the main function of the Institute. (Technical and other specialized secondary schools operate under the guidance of another institute which was not visited by this reporter). A large part of the modernization program is the plan called "differentiation and democratization" which consists of (a) homogeneous grouping of pupils into the three categories of slow, normal and exceptional (differentiation) and (b) providing the usual form and amount of subject matter to the normal pupils, special assistance to the slow learners, and acceleration between grades to those classified as exceptional (democratization). All this must be accomplished without causing friction among the groups or creating neurotic tendencies in the individual pupils. The Institute has long been dealing with certain aspects of this two-sided process, such as (a) acceleration in the first four grades, (b) transition from the self-contained grades I-III into grade IV which is organized on the basis of several subjects, (c) homogeneous grouping in Czech language and mathematics, (d) team teaching to provide different viewpoints, and (e) the offering of elective subjects from grade VII onward and entire elective programs after grade VIII. The Czechs claim to be the first socialist system to offer elective subjects at all, and also the first to provide different programs (which they call "streams") in grade IX in schools of general education. (The Soviet Union has differentiated curricula after grade VIII but only in specialized secondary schools. In Czechoslovakia, there are nine grades in the compulsory basic school). A brief description of how three projects in the experimental schools are attempting to solve the problem of "differentiation and democratization through intensification" was provided by Dr. Maran.

1. Russian language courses normally start in grade IV with two hours a week increasing to three hours a week in grades VII-IX. But one staff member of the Institute, Dr. Vaclav Cicha, is directing a Russian course which begins in grade III for five hours a week and is reduced to three hours after two or three years. Emphasis is placed on active rather than mere passive knowledge of the language. The teachers in this project are all graduates of philological instead of pedagogical faculties, and can therefore teach all aspects of the language. In addition they are accustomed to the use of mechanical aids in teaching (language laboratories, tapes, films, etc.) and the more recent graduates know the techniques of programmed instruction. Homogeneous groups are organized for the slow learners and these are taught in extra classes by the best pupils. Several of the teachers are using their classes as the basis for doctoral thesis, and the results may encourage the pedagogical institutions and faculties to reform their curricula in teacher education.

2. Another project, directed by Prof. D'Anthony Vedicka, is concerned with the improvement of natural science teaching in the first four grades, so as to provide a better base for the advanced courses which now must contain more complex data. The problem is so important that science teaching is receiving as much research attention at the Institute as is Czech language. In this project the elements of the different sciences are being taught as separate units even in grade IV, after three years of nature study and general science. In grade VI natural history is begun, in VII physics and in VIII chemistry. It is recognized that modern biology cannot be learned without the understanding of the concrete principles of nature, so the project is trying to discover what should come first. Indoor and outdoor arboreta are being set up at some schools in an effort to show pupils life processes in plants. A similar problem occurs in the teaching of mathematics, and Dr. Cicha believes another of his research teams will provide the proper sequence of concepts in this subject. He points out that Jerome Bruner has proven that children can master difficult scientific concepts at a much earlier age than previously regarded as possible, but few teachers are prepared to utilize the new methods. Special in-service courses or vacation workshops should be provided both mathematics and science teachers to remedy this situation.

3. While the two projects just described are concerned with general education, a third, led by Ing. (Engineer) Hana Novakova, is a attempting to improve polytechnical training in the basic school. Experiments using pupils in grade IX, where electronics is studied, have shown that the earlier grades have failed to provide the necessary background. The same is true in grades VII and VIII where boys study metal-working and girls cookery and child care, courses which actually lead in many cases to life-long occupations. Yet the pupils begin these courses with inadequate understanding of physics, chemistry and biology, which are basic to such applied subjects. This particular experiment endeavors to compensate for these deficiencies in the present grade IX pupils by organizing visits to farms and factories, under the direct supervision of teachers trained in the proper subjects who can explain the theoretical basis of practical operations. The teachers in social science and natural science have formed a team to offer an intensive course in "the fundamentals of production" which in 1965 replaced the Soviet-inspired practice of having pupils spend entire days in unsupervised observation or labor on farms and in factories. Since the elective "streams" are open to these grade IX pupils as well as to all others, they can still major in (a) Czech language, (b) foreign language or (c) mathematics and science. But, if they appear to need additional study in the polytechnical course, they must stay extra hours at school until their work improves. However, the teachers associated with this experiment are unanimous in viewing their work as purely remedial. The correct solution, they say, is to begin teaching the elements of polytechnical training in grade I, along with the basic theoretical concepts in the sciences. Only this way can really productive workers emerge from the nine-year basic school, and the new generation achieve a true conception of the integration of theory and practice.

B. The Pedagogical Department of the Philosophy Faculty at Charles University in Prague

The eighteen members of the staff engage in both teaching and research, the latter being undertaken on an individual bases as a rule but occasionally in teams if the problem is too broad for one person. There is also much collaboration with specialists in psychology, sociology and economics, and every one of the 18 pedagogues is engaged in such cooperative projects. One laboratory school, a basic nine-year institution, is already attached to the Department and plans call for the acquisition of a secondary general-education school in the near future. The chief concern of the Department as a whole is the transition from secondary to higher education. The general secondary school prepares deliberately for the university, while the specialized secondary school provides the basis for either immediate employment or higher technical education. In both types of higher educational institutions two factors guide the admissions process: (a) the grades of the student and (b) the demands of the labor market. (This is why the economics of education is such an important field in Czechoslovakia today). Since it is difficult to know five years in advance what the labor market will be, the pedagogues at Charles University have urged broader and easier admission policies, with more stringent selection after the first or second year. Such a move would also compensate for the often illogical guidance of parents. Family tradition plays an important role in families here: well-educated parents have prejudiced their children of both sexes toward secondary and their higher education, while families of lower levels insist that their sons go to work as soon as possible while their daughters continue in school beyond the compulsory nine years. The result is that from grade X onward girls constitute the majority in all types of secondary and higher schools, including the technical. Even though opportunities for education of working young people are ample (maybe the best in all Europe), present-day parents who attended such continuation schools in their youth prefer that their children attend secondary and higher schools full-time and thus receive a deeper and more leisurely education.

A particularly difficult problem, for which no solution has yet been found, is the youth who does not want to continue his or her education and yet is not sufficiently trained to hold better than a menial or unskilled job. Although this group is relatively small in number, and the girls usually find satisfactory occupation at home or in marriage, the boys often experience deep frustrations which result in delinquency. Several of the pedagogues interviewed are interested in this problem and hope soon to organize a research team, jointly with other specialists, to seek a solution.

C. The Institute for Research in Teacher Education is attached to the Pedagogical Department described above, but its work is specialized enough to warrant separate consideration. Established in 1959 to solve the problem of the lack of qualified teachers, the actual organization of the Institute became the responsibility of two members of the Department, Professors Jasek and Bezdek, who now direct the work of 46 scientific workers and 20 other employees. First attention was centered on the old pedagogical institutes, which the Ministry of Education had permitted to deteriorate in standards. All twelve of these establishments were either incorporated into the pedagogical department of one of the universities or given independence if no university was nearby. Once each year the Institute organizes a week-long conference which all the staffs of the pedagogical departments and the independent institutions attend.

The Institute devotes itself largely to the study of theoretical problems, in which efforts of its large staff are further strengthened by the collaboration of members of other University faculties and many teachers in various localities. Chief among the current research projects are those concerned with (a) the history of education in Czechoslovakia, (b) studies in comparative education, (c) personality as a factor in teaching, (d) teacher-pupil relationships, (e) desirable differences in instructional methods at the three levels of schooling, (f) the proper ratio in teacher preparation between education and psychology courses and courses in the disciplines to be taught, and (g) post-graduate courses for teachers to equip them to teach a second subject in the schools.

Other tasks are frequently undertaken by the Institute at the request of the Ministry of Education, particularly in the area of statistical studies. Staff members usually divide their work into three fairly equal parts: (a) teaching university courses (many hold joint posts in the Pedagogical or other departments), (b) research on Institute projects, and (c) research on problems of their own, these being pursued for the most part during holidays, vacations, and examination weeks at the University. Since the Philosophical Faculty has its own publishing agency, many of the completed projects of the Institute find their way into print. Since 1959 more than 400 books and monographs have been provided to the profession and to the public in general.

One very interesting trend is now apparent in Czechoslovakia, and that trend has two major aspects. The first aspect is the increasing value of educational psychology in teacher education programs, particularly because its empirical methods have brought about better understanding of such phenomena as motivation, which long resisted the assaults of the other sciences. In line with this, studies in educational history, educational theory, and comparative education have also begun to substitute empirical methods for the older historical-descriptive approach. A recent book by a Czech scholar, who holds a joint appointment in both the Pedagogical Department and the research Institute, is such an excellent example of this entire trend that a full synopsis of the work seems appropriate as part of this section of the report, rather than buried in an appendix. There follows a summary of PEDAGOGICKE SMERY 20 STOLETI v KAPITALISTICKYCH ZEMICH (Twentieth Century Pedagogical Trends in Capitalist Countries) by Dr. Frantisek Singule, published by the State Pedagogical Publishing House in Prague in 1966. (The summary is an official release of the publishers).

> "This book provides the reader with a profound analytical view of pedagogical affairs in western countries in the course of the last few decades, dealing with the roots of these events that reach far back into the nineteenth century. The author classifies the vast amount of widely differing pedagogical views of this period, subjectively influenced by the philosophical views of their adherents, into the following main groups: movement for the new education, pragmatic pedagogics, experimental pedagogics, dynamic pedagogics, pedagogics of psycho-analysis and individual psychology, sociological pedagogics, cultural pedagogics, fascist pedagogics, essentialist pedagogics, existentialist pedagogics and pedagogics of the philosophy of religion."

> "In a detailed analysis of these trends the author deals with the history of the movements and their main representatives, discusses their philosophical, psychological and social views and shows how their pedagogical theories arose from these views. At the same time he points out what is specific for the pedagogical thoughts of the representatives of the various trends, what attracts their attention most, and explains the relationship of every analyzed trend to the other pedagogical tendencies. At the same time he submits a critical assessment of the pedagogical conceptions and viewpoints under discussion with regards to Marxist philosophy. He evaluates all the positive stimuli contributed by these trends and criticises what is unacceptable to Marxist pedagogics and what is already outdated."

"Special attention is paid to the efforts in all the mentioned pedagogical trends at overcoming the so-called old or traditional school system and education as established during the latter half of the nineteenth century, especially by the pedagogical theory of J. P. Herbart. Here the author shows how all the pedagogical trends under discussion attempt the creation of a new pedagogical theory that would best correspond to the changes in the social conditions of the western countries in the twentieth century, and that would simultaneously be in keeping with the new image of man as created under the influence of modern anthropological disciplines such as philosophy, sociology, psychology and biology of the twentieth century."

"The whole work proves that Marxist pedagogical theory developing in the socialist countries cannot sufficiently continue to do so isolated from the development of pedagogical thought throughout the rest of the world. Its contact with other educational systems and especially the pedagogical theories of the western capitalist countries must be based on a critical study of these theories free from all former dogmatism. A critical analysis of the pedagogical trends existing in the western capitalist countries in the twentieth century from the Marxist viewpoint shows that these trends have not succeeded in creating a system of education that would entirely correspond to the great tasks facing the present young generation in the beginning social reconstruction of the world. Their solution is usually either utopian or tends towards compromise. At the same time, however, these theories were often successful in the concrete analysis of education as it exists today and thus they have contributed to the general progress of pedagogical science, and many of them--thanks to the educational system they have developed--have considerably contributed in many directions to the development of true humanity among the young people, especially by developing cultural, national and other human values. It is these aspects that Marxist pedagogues should study for they may contribute useful stimuli to the development of marxist pedagogical theory and practice."

D. The Pedagogical Faculty of Komensky University at Bratislava is headed by Dean L'Udovit Bakos, who also was one of the founders and first president of the Czechoslovak Educational Society chartered in 1966. These positions and others place him in the front rank of educators in his country and entitle him to sit in the top policy-making bodies in the field of education. When interviewed Dr. Bakos had just returned from a meeting at the Ministry of Education in Prague where the Minister had proposed several reform measures relating to school programs, teacher education and scientific studies at universities. Without revealing the actual content of the proposals, Dean Bakos used them to point out that considerable opposition developed at the meeting on the grounds that the measures were too conservative to accomplish the desired reforms. The Minister agreed to consider these protests and to talk the matter over with the Pedagogical Council of the Academy of Sciences. Even if the Minister's views are upheld there, Dean Bakos says the Commission on Education for Slovakia has the right to demand modifications. The incident is revealing because until recently the Ministry had almost complete control over the universities, but now much more authority is invested in the rectors and the deans. The present status, of course, is more in keeping with Czech tradition; the power of the Ministry arose in the wake of strong Soviet influence in the period 1945-65.

In the three years of increased autonomy of the universities (and, in another sense, the increasing autonomy of the nation) much progress has been made in teacher education. The two-year program of the ten independent pedagogical faculties has been extended to 4 years, and graduate courses will soon be offered at these institutions. By 1970, graduate study will be required for all teachers in service, in order to qualify for annual salary increases. The courses will be given by correspondence over a two-year period, and will focus each semester on a different field: (1) psychology, (2) general pedagogy, (3) didactics and (4) two subject-matter fields. However, one of the admission requirements for graduate study will be three years of teaching experience, a regulation whose purpose is to discourage the continued pursuit of theoretical knowledge before exposure to practical needs of the schools. At the undergraduate level, more emphasis is now placed on both pedagogy and psychology, with three weeks of student teaching in each of two major fields, an increase in hours of 360%.

One other trend, says Dean Bakos, is worthy of note. More and more the research projects are being undertaken by the universities instead of the numerous state research institutes which grew rapidly after 1945. Several years ago the faculties of mathematics and the sciences began setting up their own research institutes and now eight such are being organized by the university faculties of pedagogy on the model of the one at Charles University. Also, the universities in large cities are beginning to establish branches in the small towns, and Komensky University's move in that direction can serve as a model of what the parent institution plans to be in the perhaps distant future.

E. The Pedagogical Faculty of Komensky University at Trneva is a four-hour automobile ride from Bratislava and several professors from the home base commute once or twice a week. Established in 1964, the branch has its own resident faculty of thirty-five members whose offices are in a modern building which is also used at present for classrooms. A second building serves as a dormitory for resident students, and a large swimming pool on the campus is one of the advantages of out-of-city existence. A laboratory school of the basic nine-year type and another experimental school are part of the new complex; together they provide 1200 pupils to be used in the many and various experiments and projects with which the campus abounds. In fact, some of the Bratislava staff prefer to conduct their experiments at Trneva because of the relative simplicity of organizing the work there.

When the branch opened the course of study was three years plus a fourth year of full-time supervised teaching, but in September 1967 the term was extended to four full years of courses on campus. All students must take a total of 420 hours of pedagogical courses and 360 hours of psychology, the former consisting of history of education, theory of education, didactics, educational sociology, problems of education, and student teaching under the supervision of pedagogues instead of the usual subject-matter specialist. The psychology cycle is general psychology, genetics, and educational psychology. In addition, of course, the usual disciplines are offered, and students must select two majors, and take six weeks of full-time (all day) student teaching in each, plus two hours a week throughout the senior year. This last year has only half the previous hours of classes in order to permit continued student teaching, deeper study in elective courses, and preparation of the "diploma project."

The traditional job-placement procedure has also undergone fundamental change. Until recently, all graduating teachers were assigned to positions by the faculty, but now schools place job descriptions of anticipated vacancies in the newspapers, graduates submit their own applications, and the schools make the selections. The salary situation, however, is still crucial. Teachers' incomes of 1400-2200 crowns a month are much lower than engineers (up to 4000), somewhat below doctors (1600-3000) and about the same as lawyers. Remote areas pay supplementary salaries to all these professions, provide for cheap housing, and help in other ways. But the present salaries hold the proportion of women in teaching to 80%, far above the 65% which is deemed correct.

The two most important research projects on the campus, in the opinion of several staff members are: (a) the development of a vocational and professional orientation program in basic schools to guide pupils into the particular kind of secondary education and future employment for which they seem best qualified by personality, temperament, character and ability--the chief of this project sees this as a long-term endeavor about which it is far too early to forecast results; (b) devising a more objective and realistic system of marking students in the basic school, to replace the present practice of marks 1-5 on academic achievement and 1-3 on behavior. The experimental aspects of this project were carried on in seven schools in 1966-67, extended to ten schools in 1967-68, and will offer final recommendations sometime in 1969. Tentative conclusions of the research group, according to the project director Dr. Ondrej Balaz, are to suggest either retention of the 1-5 arrangement with brief statements from the teacher, or shifting to a 1-10 system which would permit better recognition of individual differences.

F. The Research Institute of Pedagogy at Bratislava is so much larger than its counterpart in Prague that one searches for the reason. Part of the explanation lies in the fact that it is the only such agency in all Slovakia, and part is found in a combination of Slovak energy, determination and urge to make up for the rather dismal past. Before 1918 there was no scientific institute of pedagogy at all in Slovakia, and even when one was founded in 1947 its only responsibility was the preparation of textbooks. Even after it was promoted to a bona fide research body in 1954 there was a period of mechanical copying of Soviet pedagogy, overlooking the traditional values of Czech and Slovak educational theory and practice. In addition, the fact that the

Ministry of Education in Prague had ultimate control of the Institute kept it from becoming a truly representative Slovak agency. Only in 1960, as control moved more toward the Commission on Education for Slovakia, did the Institute begin to find its place in the scientific study of education. In these last few years it has increased enormously in size, in scope and quality of work, and in national prestige.

It is now housed in a large building in the center of Bratislava where a permanent staff of 60 scientific workers and 60 assistants are organized into six departments and 115 units, each having responsibility for some aspect of educational research. This large staff is constantly assisted by the members of the Pedagogical Faculty at Komensky University (there are many joint appointments) by the other research organizations in Bratislava and Prague, and by literally hundreds of principals and teachers in the schools of Slovakia. It is rather strange that, when originally established, the regulations specified that the Director must be a member of the Czech or Slovak Academy of Sciences but, as the Institute turned toward research of a practical nature, this requirement was removed. Now it is headed by Docent Jan Kotoc who posseses the degree of Candidate of Science (lower than the doctorate) and an extraordinary talent for organizing research activities.

Although the Institute is occupied primarily with the particular needs of Slovakia, it frequently attacks national issues in cooperation with its counterparts in Prague. Its actual work crosses over the administrative lines of its physical structure and is carried on by six groups each having a fairly well defined task, namely: (1) pure theory of pedagogy, (2) practical application of theory to general problems, (3) educational psychology and "defectology" (resembling special education in the U.S.), (4) vocational and professional schools, (5) schools for the Ukrainian and Hungarian minorities, and (6) teacher education at both undergraduate and graduate levels. The heads of all these groups were interviewed and advised this reporter on the matter of school visits to observe how the work of the Institute is utilized in practice. In all, ten schools were visited but it will suffice to describe here three selected from this number.

1. The Boarding School at Bratislava under the direction of the Institute's research group in Defectology is the only school of its type in Slovakia but there are three in the entire nation.

Its special field is the partially sighted child and it enrolls 180 boys and girls, aged 6-15 years, with sight defects. There are sixteen parallel classes, each with about twelve children. Some cases are complicated and involve also deafness, nerve and motor ailments, and mild neurosis. Each child gets five minutes a day of special eye exercises under the direction of the resident doctor or nurse. A great deal of electrical equipment is used and some of the treatments are delicate and complex. Music is used both therapeutically and for an academic purpose: many of the pupils reveal talent in this direction and a few become professional musicians. The whole aim of the school is to equip the afflicted children to live normally as soon as possible. After even one year some return to regular school life and visit this institution only for periodic treatment. Most of them, after graduation, can live normally and many learn to support themselves. For those who cannot, their education and care continues in another school, sometimes for life.

2. The Experimental Secondary School in Bratislava under the supervision of the Institute group on the application of theory to general education was opened in 1960. It specializes in the teaching of foreign languages in grades X-XII. There are 45 teachers on its staff serving 823 pupils in 21 classes, each containing 40 pupils often under the simultaneous tutelage of two teachers. The team-teaching approach is used partly to compensate for the crowded condition which forces class size above the legal limit of thirty-two. The usual two "streams" are offered: (a) mathematics and science, and (2) social science and the humanities. Pupils must take both Czech and Slovak languages and also Russian. Other foreign languages are on an elective basis but one is required: English is the most popular choice, German second, French and Spanish third. As an experiment, the most interested pupils are given daily lessons of two hours in the chosen language, and the results so far indicate that the time is well spent. The school has the only language laboratory in Bratislava at present, but others will soon have them. In the near future the school will inaugurate the teaching of history and chemistry in English if it can obtain the proper textbooks. Native teachers are used whenever possible: the teacher of Russian is always a Russian, the teacher of French was brought from Paris for an indefinite stay, and the school director, Mr. J. Repa, would like an English teacher from the United States.

The efforts expended on this project are judged worthwhile by the Institute staff. Motivation toward further study is high:

more than 90% of the pupils have expressed a desire for higher education, and 250 of 270 graduates in 1967 took the entrance examinations at universities or higher technical schools. Seventy, or 28% failed the exams and went into the labor force, but a large number of these will continue their studies, re-take the exams, and most of them will ultimately be admitted. Evidently the motivation inspired by this school is unusually durable.

3. Secondary School No. 5 in Bratislava has had for the past five years a specialized course in mathematics, with particular attention to the use of computers and the training of skilled computer operators. The basic curriculum is the same as the foreign-language school described above, but here the best pupils receive an extra hour a day of intensive instruction in mathematics. One very special group is taking a course in Mathematics and Logic under a prominent professor from the University. There are also "circles" or clubs in math and science, also led by faculty members of the University. Seventy percent of the graduates continue their studies, more of them in the technical institutes than in university, and most of these are employed ultimately in research institutes. However, a few do become teachers, and some enter medical school. The thirty percent who do not continue their education find ready employment in all kinds of offices and factories.

In September 1967 a parallel "stream" was set up in Latin and Greek. Since there is no place in the labor market for the "middle specialist" in this field, all plan to enter the classical faculty of the university. The addition of this stream brings the school a step closer to becoming an experimental appendage to Komensky University, since the Institute is not equipped to handle classical languages. It will still assist, however, and is planning to assign to the school in the near future the first school psychologist to be licensed in the nation.

F. Summary and Conclusions on CZECHOSLOVAKIA

Czechoslovakia owes to the Communist regime neither its industrial development nor its system of universal education. It was the first industrialized nation on the continent and in 1947 it was a model of efficiency and productivity. Much of the rancor which Czechs felt for the Russians, even before 1968, is due to the fact that this magnificent plant has been allowed to disintegrate in the past twenty years. Whether the new regime will be able to accomplish the necessary reconstruction, in economy as well as in politics, remains to be seen. Certainly, educational progress along the lines now planned will require a great improvement in both areas. In any case, the Czechoslovaks are determined to improve an already good school system. The main problem is that a long period of industrial preeminence had permitted the growth of a classical-humanist tradition in education which had acquired enormous prestige. Still only twenty years away from that era, the populace clings to this bias while the leaders in all professions realize that a generation of technically oriented personnel must be developed as quickly as possible if the industry is to be saved. All nations moving from agrarianism to industrialization have had this problem, but Czechoslovakia's situation is peculiar in that it must make its efforts within the framework of an already modern society. Therefore, in order to preserve the status of the social, behavioral and humanistic studies and at the same time elevate the prestige of technical pursuits, the old system of gymnasia on the one hand and vocational schools on the other must be completely reorganized. The basic elements in the new plan are symbolized by the phrase "differentiation and democratization." Envisioned is a broad system of comprehensive schools which will provide all pupils with a common body of knowledge during the first six years, offer certain elective programs in the next three years, and a high degree of specialization in the last three grades of a twelve-year course of study. Only the first nine years would be compulsory at the outset, but even this period would produce a large army of semi-skilled workers who would then receive on-the-job training. The graduation certificates of all would have the same value, as would those granted at the end of twelve years. The latter would provide access to higher education for all who could pass the entrance examinations, and access to skilled-labor posts for those who did not; in both cases, regardless of their fields of specialization. This pattern, of course, was the original intent of the American comprehensive high school, and our history is not being overlooked by the Czech educators. The irony is that, while it is Czechoslovakia which can probably profit most from our assistance, we have no Fullbright program there such as we have in Yugoslavia, no cultural exchange agreement like ours with the Soviet Union, and no formalized institutional exchanges such as we enjoy with Poland. Perhaps the top-level changes now going on in Prague will produce a climate in which a program of exchange can be worked out to include not only government-sponsored exchanges but also negotiations between universities in the two countries.

Last year the Questor of Charles University, the third highest official in the institution, spent two months in the United States laying the groundwork here for academic exchanges. There is still a chance that the new government will be receptive to such proposals.

PART IV. APPENDIX: THE SOVIET UNION

The reason for a different pattern of presentation of the data on the Soviet Union is explained fully in the Introduction and Summary on pages 1-9 of this report.

Strengths and Weaknesses in Soviet
Research in Education
(addenda to the report of Wm. H. E. Johnson)

I STRENGTHS

1. In the HISTORY OF EDUCATION, as in all research in history, the Soviets are governed by a materialist conception based upon the Marx-Engels theory of class struggle, as outlined in Marx's Preface to the Critique of the Gotha Program, Engels' Anti-Duhring, and Lenin's Marx-Engels Marxism. Despite the fact that this theory of historical development is not widely accepted outside the Communist world, it does provide Soviet researchers with a unified and logical frame of reference through which they can present the history of education in all ages and all regions as a continuous (even though often interrupted) process. While such a view undoubtedly possesses many weaknesses, faults and errors, it is probably as valid as concepts based solely upon the morphology of Spengler, Toynbee, Hegel, Buckle or W. G. Sumner. Most important, it permits teams of researchers to focus and coordinate their efforts toward presentation of a broad panorama of historical development of educational theories and practices from primitive societies to the present.

2. Research in PSYCHOLOGY, as applied to education, also has the benefits and disadvantages of being based upon a single scientific concept, in this case that of Ivan Pavlov. But here the major advantages derive from two facts, namely (1) that Pavlov admittedly limited his researchers to physiology, however broadly considered (see his Introduction to the first Russian edition in Dr. Horsley Gantt's translation of the Lectures on Conditioned Reflexes) and (2) that neither Marx nor Engels, nor Lenin nor Stalin, attempted to impose definite guidelines for scientific-research in psychology. Among Soviet psychologists today there are interesting and objective studies being made in the areas of higher nervous activity, cybernetics, the bio-chemical bases of

aberrations, the interrelationships of the individual and the collective, and learning theory, to name only a few. (Note that there are also important physiological factors in the research being conducted in the fields mentioned below). After all, they ask, are the laboratory findings of Pavlov a less secure foundation for scientific research than the subjective and still highly controversial hypotheses of Sigmund Freud?

3. DEFECTOLOGY is a Soviet term which can now be translated as "special education." Until recently, the Soviets included in this area only physical defects, but the 1960 edition of Pedagogicheskii Slovar and subsequent similar publications now define the term as "the study of physical and psychical inadequacies in children" (sic). Despite the age-group limitations still imposed even by the newer and broader conception, a large number of well trained Soviet researchers are working in well equipped laboratories in attempts to reach solutions of the highly complex problems encompassed by this field. Partly because of their preoccupation with the materialist aspects of such work, they are developing theories and programs which should challenge many of the conclusions now widely accepted in the West.

4. During the past half-century, SCHOOL ORGANIZATION has undergone changes in the Soviet Union, just as it has in the United States. However, the basic Soviet concept of four elementary grades, followed by a compulsory three or four years intermediate and a selective three or four years senior period remained standard until about three years ago. In 1958 the authorities had decreed that an additional year be added to the ten-year curriculum which had been in effect since 1936, and that the former seven-year ("incomplete secondary") school be extended to eight years and become the compulsory period of general education. The last three years remained selective and largely specialized, thus providing an eleven-year program of "complete secondary education." This official revision

of the 22-year-old program opened the doors to scientific investigation of other alternatives and permitted the exploration of other age-grade sequences. The revocation of the 1958 decree and the return to the ten-year school (eight grades plus two) in 1963-64 reinforced the hypothesis that no program or sequence was sacred. It was at this time that the Academy of Pedagogical Sciences of the RSFSR was assigned the task of experimenting with other arrangements, and Prof. L. V. Zankov was put in charge of the research. The details of this experiment will be described in another part of this report, but it can be stated here that several hundred schools in the U.S.S.R. have now been converted to a 3-4-3 sequence and that Prof. Zankov looks forward to reducing this to 3-3-3 (or a nine-year complete secondary program) in the future.

5. Despite the many revisions in the Soviet CURRICULUM of "complete secondary education" during the past thirty years, a careful analysis reveals that the major academic subjects have continued to enjoy the traditional emphasis. In fact, the present compulsory eight-grade program of incomplete secondary education is not fundamentally different, in the relative attention to academic subjects, from the famous Ignatiev Plan of 1915! (see William H. E. Johnson, Russia's Educational Heritage, pp. 294-5, and the same author in Moehlman and Roucek (eds.), Comparative Education, p. 395). The Soviet view on curriculum revision might therefore be summarized: Hold fast to the essentials, shift frequently the subordinates. This slogan seems to guide Soviet policies in other areas as well.

6. Even though the items above have been classified as "strengths" of Soviet research in education, I do not believe that in any of these areas the Soviet Union actually surpasses the United States. Our histories of education offer more data and more concepts than theirs, our research in psychology delves into realms not even considered in the U.S.S.R., our work in special education knows no age-group limitations, the development of our 6-3-3 arrangement of school organization has been one of the truly great contributions to twentieth-century education, and we

have vastly changed the traditional concepts of curriculum throughout the western world. However, there is one area at least in which we rank far below the Soviet Union, and that is in FAMILY-SCHOOL RELATIONSHIPS, to use the Soviet term for what we call Parent-Teacher Associations. The difference in nomenclature itself is significant: we tend to view such relations as personal, the Soviets see them as institutional. Also, our PTA meetings frequently seem to have the aim of informing teachers and principals about the parents' ideas on child development; equivalent sessions in the U.S.S.R. instruct the parents on ways to reinforce the program of the school. Many Americans, of course, regard our approach as the only correct one, but even these could not claim that we surpass the Soviets in research toward the respective goals. In 1962 there was established under the Academy of Pedagogical Services of the RSFSR an agency named Dom Propagandy (House of Propaganda), which was charged with preparing materials of all kinds to create better parental understanding of the aims and methods of Soviet schools and to encourage more active and informed parental support of those aims and reinforcement of the procedures. All the resources of the ten research institutes and the several other agencies of the APS were placed at the disposal of Dom Propagandy, in addition to its own staff of researchers, writers, editors and artists. As its Director, there was assigned I. I. Grivkov, formerly president of the Trade Union of Educational and Scientific Workers of the U.S.S.R., whose membership numbers more than four million. The agency is preparing striking new materials (reminiscent of the vital adult educational programs of the USSR in the 1920's), and is utilizing the advanced organizational and agitational techniques which its Director and his staff developed in the trade union. Although the work of this new agency is not favorably regarded by some of the "intellectuals" in the APS, its activities are deeply appreciated by teachers and parents who come into daily contact with the problems of coordinating the efforts of two great social institutions in the direction of a common objective: the welfare of the child.

II WEAKNESSES

1. Soviet research in METHODS OF TEACHING probably suffers fewer political and ideological restrictions than any other aspect of education. As in their custom, the Soviets insist upon unanimity of aims and goals in all phases of existence, but permit considerable latitude in the determination of means to reach the goal. In a purely philosophical sense they realize that ends and means are interactive, but there is no doubt that politically they operate under the principle that desirable ends justify all necessary means--and education, to them, is a political institution (see Marx, Engels, Lenin, Zhdanov, Stalin, Khrushchev, and the proceedings of the XXIII Congress of the CPSU). The Soviet methodologist, therefore, can actually roam the whole world of pedagogical literature to find and adopt almost any useful method of teaching his subject. With what results? Classroom teaching, at all levels except the kindergarten, is routine, dry, catechetical, rigid and monotonous. Modern foreign languages, for example, are taught very much by the same methods employed in the United States in the 1920's for the teaching of Latin. There are many reasons for this phenomenon, chief among them being: (1) the unified and standardized curriculum, especially in the first eight grades; (2) the elaborately detailed and mandatory course of study for each subject; (3) the great importance of the archaic "comprehensive" examinations which test largely the ability to memorize much insignificant detail; and (4) the tendency of most teachers, everywhere, to carry on their teaching in a conventional manner. There is one additional reason: in this case as in several others mentioned herein, there is almost a schizoid refusal to carry over into actual teaching the best results of the tremendous amount of research performed.

2. There are no courses in SCHOOL ADMINISTRATION in any of the approximately

200 teacher-education establishments in the Soviet Union, and no courses in this particular field in all the U.S.S.R. Whatever training is provided in this specialty occurs in courses and institutions coming under the direct aegis of the Communist Party, where techniques of school management are taught along with those of operating farms and factories, with the political aspects receiving major emphasis. Such a situation would probably be disastrous in the United States, where school principals and superintendents must exercise considerable discretion both in the formulation of school policies and in carrying them out. In the Soviet Union such school officials tend to be mere functionaries of the city or village councils, and therefore an elaborate training program is unnecessary. Nevertheless, the lack of such training certainly results in reinforcement of the monolithic character of curricula, courses of study, and methods of teaching. Only in those school administrators chosen for experimental projects of the Academy of Pedagogical Sciences does one find a display of imagination and initiative. Once more, however, the gap between research findings and their translation into wide-spread practice looms large both in time and in space.

3. There is no achievement about which the Soviet people are so proud as in their fantastic success in the area of HIGHER EDUCATION. A nation which in 1914 had a total of about one hundred institutions enrolling 125,000 students has added 650 such institutions and increased the enrollment more than 3000 percent! Yet all this has been accomplished with the absolute minimum of research on how many institutions are needed and how large each should be. The State Planning Commission issues directives regarding the number of graduates needed in each specialty (determined by far from scientific estimates) and the Ministry of Higher and Specialized Secondary Education of the U.S.S.R. and its subordinate ministries in each republic must supply the demand. As a result of this purely quantitative method, the number of higher educational establishments increases or decreases spasmodically:

880	in	1950-51					
766	"	1958-59	minus	114	from	previous	period
739	"	1960-61	"	27	"	"	"
742	"	1963-64	plus	3	"	"	"
754	"	1964-65	plus	12	"	"	year

while over the same fifteen-year period the number of students enrolled increased enormously *each year*. If there *is* any Soviet agency which initiates, develops and coordinates research in higher education, it is most likely the Ministry of Higher and Specialized Secondary Education of the U.S.S.R. Certainly, the APS does none, for it is subordinate to the Ministry of Education of the *RSFSR*, and thus must limit itself to problems of the institutions embraced by that Ministry. In contrast, the *Academy of Sciences of the U.S.S.R*. covers the entire Soviet Union, has a separate branch in *each* of the republics, and is directly responsible to NO Ministry at all, but to the Council of Ministers of the U.S.S.R. As long as the APS must work under the complete dominance of its parent Ministry, the scope and character of its influence will be severely limited, especially in the area of higher education.

4. Soviet educational authorities appear to possess an actual *phobia* regarding INTELLIGENCE and APTITUDE TESTING (see the mimeographed report of Henry Chauncey, President of Educational Testing Service, on his 1964 visit to the Soviet Union). Discussions about education in the United States usually can be conducted politely and objectively on any topic except this one, but here rationality gives way to paranoia. It seems that Soviet pedagogues are aware of all the denunciations of I.Q. testing which have appeared anywhere in the world, and that they accept them *in toto*. One psychologist actually defended the Soviet legal proscription of such tests by pointing out that even in the USA we forbid the administration of drugs to students by teachers, and that I.Q. tests are much more dangerous than marijuana. However, I have been told more than once that the Soviet Army uses such tests as part of the induction procedures--it would be most interesting to investigate the validity of this report.

5. Soviet research in COMPARATIVE EDUCATION is centered in the Section on contemporary Pedagogy and Schools Abroad, which is a part of the Institute of Theory and History of Pedagogy of the APS. Its staff of 15 researchers contains specialists on education in the United States, England, France, Germany, Latin America, Eastern Europe, China, Japan and Africa--in each case the specialist is a competent scholar, well trained in fundamental pedagogy, and proficient in the major languages of his area. The Section publishes a quarterly journal of about 75 double-column pages (Pedagogy and Public Education in Foreign Countries), each issue numbering 2000-2500 copies. In addition, the staff of the Section has recently published ten books devoted to education in the major nations, and is constantly preparing other such volumes. Of all the agencies with which I came in contact during my three-month sojourn in Moscow, none was as hospitable, helpful and interested in my project as was this Section. I had close contact with all of the staff and can truthfully say that every one of them impressed me most favorably. The headquarters of this Section (in a wing of the Ushinsky Library building) was one place in Moscow where I felt perfectly at home in both an academic and a personal sense. I strongly recommend that visiting Americans interested in Soviet education be guided toward this group, particularly to Birilko, Krepikov, Lanchinskaya, Malkova, Vulfson, Piskunov and L. N. Goncharov (the last two recently promoted to staff posts in the Institute of Theory and History of Pedagogy).

Why, with all that I have said about this Section, do I list it in the category of "weaknesses?" The answer is that here, perhaps more than in any other branch of Soviet educational research, one can see the tragedy of able people forced to present their research findings in a manner totally consistent with current political and ideological doctrines. The sole axiological criterion of education in any foreign nation is: How closely does it follow the existing Soviet pattern? The amount of diligent research done by Malkova on the USA and Piskunov on the German Democratic Republic, to take only two examples, is most impressive; yet the conclusions of both must support the Soviet dogma that education in a "capitalist" nation is basically an evil force and in a "socialist" state a completely benevolent institution. This same weakness, of course, pervades many other areas of Soviet intellectual endeavor.

6. It well may be that all the weaknesses in Soviet educational research stem from the fact that, while the political-economic theories of Marxism-Leninism are relatively forthright and clear, the same certainly cannot be said for the corresponding THEORY OF PEDAGOGY. Despite the fact that several volumes of the "educational" writings of Marx, Engels, Lenin, Kalinin (and even Chernyshevsky and Dobroliubov!) have been collected and published by the Soviet Union, there exists no comprehensive yet concise expression of a Soviet philosophy of education. The 1960 edition of Pedagogicheskii Slovar (Pedagogical Dictionary) devotes 29 page-columns to the definition of the term "pedagogy" but leaves the reader with no clear-cut conception of its meaning as distinct from current theories of education in other large industrialized nations. Marx himself merely stated that the aims of education are three-fold--mental, physical and polytechnical--which offers a woefully inadequate formula for the development of a national system of education. Moreover, despite a long-term (since 1936) general agreement among Soviet pedagogical theorists as to the implementation of the first two Marxian aims, there have been several major revisions in the interpretation of the "polytechnical" aspect. Lenin viewed it as the mastery of one field of specialization, Stalin saw it as an understanding of the basic sciences of production, Khrushchev thought it to mean mastery of two or more skills; to date, neither Brezhnev nor Kosygin has committed himself on the question. I found nearly everyone in APS delighted to talk about current research in all aspects of education except one: Theory of Pedagogy. No text in this subject is used in Soviet pedagogical institutes or schools, no group in APS is assigned specifically to the preparation of a text in the particular area, no one was willing to define for me the current interpretation of "polytechnical

education" beyond the statement in the 1960 Pedagogicheskii Slovar which conforms, of course, to the Khrushchev view. The only tangible information I was able to obtain was that two prominent members of the APS staff, V. E. Gmurman and L. V. Zankov, had prepared a textbook to be entitled Osnovy Sovietskoi Pedagogiki (Fundamentals of Soviet Pedagogy) which would provide the latest official views on educational philosophy. Although both authors agreed to let me read parts of the work in galley-proof form, I was never able actually to obtain it, and was finally informed that I had better wait until after the XXIII Congress of the CPSU in 1966 when the approved text would be published and a copy sent to me. It hasn't arrived.

The net result is that, as late as December 1965, no one in authority was willing to discuss in depth the current Soviet educational philosophy. The staff of APS seemed to agree that the historical guides to such a philosophy (aside, of course, from Marx and Lenin) were K. D. Ushinskii (1824-70), N. K. Krupskaya (1869-1939) and A. S. Makarenko (1888-1939). Without enlarging upon the subject, I would say that accepting these three persons as the sole sources of pedagogical wisdom in the Soviet Union is the equivalent of our taking as guides for a U. S. philosophy of education such people as J. F. Herbart, Eleanor Roosevelt and Austin McCormack. Great as all six were in their own fields, it is doubtful if complete reliance on their educational views could lead a modern people toward a full understanding of the Age of Technology and Space. In preference to these, both the Russians and the Americans would be better off even with John Dewey.

THE ACADEMY OF PEDAGOGICAL SCIENCES OF THE R.S.F.S.R.

Founded in Moscow, 1943-44, as adjunct to Ministry of Education of RSFSR

A. Officers

President: V. P. Potemkin, 1943-46
I. A. Kairov, 1946--present
Vice-Presidents: A. I. Markushevich (academic affairs)
N. D. Kazmin (budgetary matters)
Director of Research: F. F. Korolev

B. Staff

35 full members who are on full-time loan to the Academy and receive regular salary plus 350 rubles a month
65 correspondent members who are on part-time loan to the Academy and receive regular salary plus 200 rubles a month
700 scientific research workers, full-time on regular salaries
1200 laboratory and other assistants, including 800 active teachers, some full-time and some part-time

C. Ten Institutes (each with a Director and staff, and located in Moscow unless otherwise noted)

1. Theory and History of Pedagogy (has Section on Comparative Education)
2. General and Polytechnical Education
3. Industrial Training
4. Pre-school Education
5. Evening (two-shift) and Correspondence Secondary Schools (Leningrad)
6. Psychology (correlates with Psych. Dept. at Moscow University)
7. Defectology (sight, hearing, speech and intellect defects)
8. Developmental Physiology and Physical Education
9. Art Education ("nurture")
10. Nationality Schools (Ufa, Kazan and Irkutsk)

D. Other agencies of the Academy (same as C, above)

1. The Ushinsky Library contains more than one million books on pedagogy, 125 thousand of them in foreign languages through exchanges with 70 agencies in 35 nations. Receives 80 U.S. journals
2. Propaganda House, established in 1962 to prepare materials in parent education such as the periodical "Pedagogical Advice to Parents"
3. Uchpedgiz Publishers produces all textbooks in the Russian language and many other pedagogical works (under joint supervision of Ministry of Education)
4. Scientific Archives publishes large-scale historical works such as the writings of K. D. Ushinsky (16 vols), N. K. Krupskaya (4 vols), etc.
5. Three laboratory schools, converted in 1962 for the exclusive use of the Academy
6. More than 100 experimental schools in several parts of the RSFSR, which the Academy uses frequently for research and experiments
7. Several hundred cooperating classrooms in day schools, boarding schools, schools of "defectology" (see C, 7 above), etc.

E. Publications

1. Six Periodicals: Soviet Pedagogy, Questions of Psychology, Family and School, Russian Language in Nationality Schools, News of the Academy, Education Abroad.
2. Several reference works: Pedagogical Dictionary, Children's Encyclopedia, Pedagogical Encyclopedia (as collaborator), Soviet Historical-Pedagogical Literature, 1918-57 (volume on 1958-65 in process), and various other indexes to publications
3. Translations of important foreign books on education
4. Many other scientific works by members and staff as well as other authors (see G, below)

F. Miscellaneous Activities

1. prepares, for publication by Uchpedgiz (D, 3 above), many textbooks and teachers manuals
2. organizes annual or semi-annual "Pedagogical Readings," which are meetings where educational workers report on actual problems encountered and solutions found, on a kind of case-study basis. Many of the reports are published
3. organizes several other types of professional meetings in many parts of the RSFSR
4. selects educational workers for attendance at domestic and foreign conferences on education, and pays all expenses for them
5. maintains official and close contacts with

   Humboldt University in East Berlin
   Komensky Institute in Prague
   Warsaw University and others in Poland
   Rumanian Academy of Sciences
   Bulgarian Academy of Sciences
   Bucharest Institute of Pedagogy
   International Association of Scientific Psychology
   British Psychological Society
   National Foundation for Pedagogical Research (Gt. Brit.)
   University of London
   Columbia University (USA)
   Comparative Education Society (USA & Europe)
   Japanese Society for Pedagogical Research

G. Publication Plans for 1966-70: 183 monographs and texts,
121 full-length books

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